

AN
INQUIRY
INTO THE
STATE OF MEDICINE,
ON THE PRINCIPLES OF
INDUCTIVE PHILOSOPHY.
WITH AN
APPENDIX;
CONTAINING
PRACTICAL CASES and OBSERVATIONS.

By ROBERT JONES, M.D.

The Sciences and Arts are created by the discovery of general facts in Nature.

Parties have contended for speculative opinions, not for discoveries or useful knowledge.

Professor BRUCE's *First Principles of Philosophy*.

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MDCCCLXXXI.

John Richardson Esqre M.D.

Natural history consists in the
observation of phenomena and collection
of facts.

Science consists in the knowledge
of the relations of phenomena
& facts to each other.

And philosophy in the knowledge
of the causes of these relations.

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T O
DR B R O W N.

SIR,

YOUR enemies may oppose, disparage, and do their utmost to decry, yourself and your doctrine. But the nature of truth is such, that it needs only to be known, to beget conviction. The application of this to you is, That you have made a great and useful discovery; and which only wants time, and the exercise of your talents, to render it as universal, as it is important.

I am,

SIR,

With profound esteem,

Your most obedient,

humble servant,

EDINR. Oct. 25. }
1781.

R. JONES.

DR B R O W N

Sir,
Your enemies may oppose this
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R. JONES

P R E F A C E.

IT has been an observation from time immemorial, That the arts and sciences, which have had a reference to the wants of mankind; have been more rapid in their progress, than those that have had pleasure solely for their object. The useful and mechanical arts were solely studied for the purposes of life. Hence Astronomy was first of all applied, as a rude art, to the purposes of agriculture; and Geometry limited to the mensuration of land. For the periodical overflowings of the Nile rendered it difficult, if not altogether impracticable, to discover the precise limits of each individual's property contiguous to this river. Hence, therefore, this art arose. The same cause still operated, as may be discovered from the further progress of the effect; since we find this science making more rapid advances in improvement than any other.

Few arts or sciences, if we estimate
b them

them by their subserviency to error, have in this respect kept pace with medicine. Some have gradually arisen from rudeness to refinement; the emancipation of others, from the chains of error and fruitless inquiry, has been as speedy; while the progress of others was equally slow with that of Medicine. But we are authorised in observing, that there exist no departments of human knowledge, where the wants of men are so clearly marked, in point of error, equal to that of Medicine. Its most celebrated cultivators assert it to be a conjectural art; consequently little enriched by science. An attempt, therefore, to apply to it the principles of philosophy, in order to confer upon it the character of Science, and to rescue it from the frivolity and pedantry, under which it hitherto has groaned, surely merits some candour: and physicians, with all deference to their character, may be taught by the philosophers, who have discovered the laws of nature in other sciences. If they cannot adopt their lessons, they may adopt their method of discovery. Chance
may

may do for graduates what it did for the discoverers of the magnet, gun-powder, gravitation, &c.: But if graduates are to be only believers, bigots, or, to use the phrase, Tories in medicine, by a blind attachment, or passive obedience, to systems; in that case, we must give up all hope, that the healing art will have its science to simplify and explain it.

Philosophy we must admit to be equally required in medicine as in the other sciences. And, as we propose to illustrate a discovery, not universally known, but to which we may boldly assign a place among those which are to last for ages, upon the principles which it holds forth, we need no additional argument for the task we have engaged in.

The arts and sciences, we shall hereafter have occasion to observe, have been found to be considerably affected by the spirit of political laws. In free states, they are cherished; in despotic ones, they languish: notwithstanding which, they are, as if in the course of nature, found to be progressive. This is a truth exemplified

in the progress of political and municipal laws—in the fine as well as the mechanical arts—in the sciences and liberal arts.

There are, however, some departments of knowledge which keep pace with our profession, viz. That which hath a reference to intelligence, and that which relates to the human will.

Physics also, till improved by that sect of philosophers denominated the *modern eclectic sect*, was a subject of similar inaccuracy. The former sciences, however, have their apology; their natural history being but imperfectly delineated. Hence inductions, in intellectual and moral subjects, derive their incompleteness; and hence the difference between the certainty in morals and in physics.

In the latter, the analysis or natural history is complete; but that of the former is to begin.

Till the science of quantity was applied in its mixed aspect to the mensuration of material phenomena, mechanical philosophy was very imperfect. We are indebted

P R E F A C E

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debted to Des Cartes for this important hint ; and the discoveries of Newton, assisted by it and the lessons of Bacon, evince its importance.

These remarks afford a brief solution for the causes productive of the stationary appearance of these sciences. But, if we consider attentively the profession of medicine, no well grounded apology can be offered for its present imperfect condition.

The doctrine of the human body is a branch of nature as susceptible of observation and experiment, as any department of it. We can observe it in its state of infancy, manhood, and old age ; each of these states afford correspondent phenomena in the functions of the body, as well as in the faculties of the mind ; there is a regular progression in each. The child can remember, abstract, imagine, reason, judge. The functions of the body discover a perfect correspondence in the regularity of their progression. At first they are weak and feeble, like those of the mind ; they gradually mature ; they

then for some time remain stationary; they next retreat with an equal pace back to their original impotence; till, like the autumnal leaf, they wither and perish. At this period, memory is found first to forsake man.

This is the progress of human nature.

Each of these phænomena suggest important hints for reflection, and lead to great and manly views of nature: as they instill into the mind of its observer, several useful precepts; at least one important reflection follows, viz. That nature's laws are uniform and universal.

Our wonder, that medicine should still remain in the condition of a rude art, in some respect ceases, when it is considered, that the principles of sophistry have been adopted and applied to it from the earliest times.

At one period, it is applied under the ensnaring aspect of sophistry in science; at another time, under the less seducing appearance of sophistry in argument. The spasmodic doctrine is an example of the
for-

former; the Boerhaavian opinions, and the unnatural assumptions prevailing in systems of the Materia Medica, of the latter. A solution to the paradox is therefore unfolded, when we find the method of science and argument applied to establish what is uncertain or false.

It may be urged against this assertion, that the method inculcated by Bacon and Newton, is adopted by a part of the profession, viz. the chemists and physiologists. Granting its truth, we would ask what benefit is expected to accrue to the art of preserving health and curing disease, when mens attentions are engaged in the ridiculous occupation of discovering the number of coats in an intestine, the precise situation and use of a bursa mucosa, or in the preposterous and truly romantic belief, that the animal, vegetable, and mineral kingdoms, are composed of nerves?

An equal solicitude is observed by others in order to discover the constituent parts of the serum, gluten, and red globules of the blood; and premiums, forsooth, are given

given to the successful actors of this species of the drama.

That such inquiries as these would add some degree of dignity to the descriptions and remarks of a Sancho Pancho, we admit; but that they should lead us to stumble on any truth beneficial to mankind, is altogether ideal and absurd.

“ So that it is no wonder if noble and
“ worthy inventions, suitable to the dig-
“ nity of mankind, are not brought to
“ light; whilst men content and please
“ themselves with such slender and child-
“ ish performances, and at the same time
“ imagine that they perform great matters
“ by them. But the sciences have been
“ much more hurt by pusillanimity, and
“ the slenderness of the tasks which men
“ have proposed to themselves; and yet, to
“ enhance the mischief, this pusillanimity
“ is not without its pride and disdain.”
But the admiration which these lessons and
employments create, though simple and
childish in themselves, “ has been in-
“ creased by the craft and artifice of such
“ as treat and deliver the sciences; who
“ pro-

“ propose them with that state and af-
 “ fection, or so finely fashioned, and
 “ bring them so dressed upon the stage,
 “ as if they were perfect in every part,
 “ and so many finished things. For, to
 “ look at the methods and divisions of
 “ these teachers, they might seem to con-
 “ tain and include every thing that can
 “ fall within the subject. And though
 “ the parts are ill filled up, and in reality
 “ little more than empty ^{skeletons} carcases; yet
 “ they pass currently among the vulgar as
 “ having the form and fulness of com-
 “ plete sciences.

“ Another great reason of the slow pro-
 “ gress of the sciences is this, That it is
 “ impossible to proceed well in a course
 “ where the end is not rightly fixed and
 “ defined. Now, the true and genuine
 “ end of the sciences is no other than to
 “ enrich human life with new inventions
 “ and new powers: But much the greater
 “ number of the sciences produce nothing
 “ of this kind, being mere hirelings, and
 “ professorial; unless sometimes, by acci-
 “ dent, an ingenious artificer, through de-
 “ fire

“ fire of glory, endeavours after some new
“ invention; which he generally pursues
“ to his own loss: Whilst the bulk of man-
“ kind are so far from proposing to enlarge
“ the mass of arts and sciences, that they
“ only take from the present collection,
“ or covet so much as they can convert to
“ the use of their profession, their own
“ advantage, reputation, or some such
“ narrow and inferior purpose. There-
“ fore, since the end of the sciences has
“ not hitherto been well fixed and defined
“ by any one, we need not wonder if
“ men have erred and wandered in the
“ things subservient to the proper end *.”

All this applies to our subject with the greatest exactness. For nobody will hesitate in pronouncing, that physicians have contented themselves with small performances, nay, that they have always lost sight of the proper end of their profession, the following detail will probably evince. The plan we have chalked out is conformable, in some measure, to that pointed out by Lord Bacon. And the maxims displayed

* Nov. Org. Scient. Bac.

displayed throughout this work will, I expect, be not very remote from his lessons.

Independent of the application of his principles to the profession, we have examined its different aspects by his rules, and found none in the least grounded on them, unless that which we have entered into a full discussion of, and which we hope will be displayed to the reader in the most simple and natural form.

I cannot however, with propriety, conclude this prefatory part without acknowledging my obligations to Professors Bruce and Robison for the advantages I have received from their valuable lessons in the study of nature; and at the same time adopting the language of Lord Bacon, whose philosophy they have applied to their particular sciences, and which I have so studiously adhered to:

“ And now we have only this request
“ to make, that as we have bestowed
“ much thought and care, not only that
“ what we offer should be true, but also,
“ as much as possible, that it should be
“ accessible

“ accessible to the human mind, though
“ strangely beset and prepossessed; we in-
“ treat it, as a piece of justice at the hands
“ of mankind, if they would judge of
“ any thing we deliver, either from their
“ own sense, the cloud of authorities, or
“ the forms of demonstration, which now
“ prevail as so many *judicial laws*; that
“ they do it not on a sudden and with-
“ out attention, but first master the sub-
“ ject, by degrees make trial of the way
“ we chalk out, and accustom themselves
“ to that subtlety of things implanted in
“ experience; and lastly, that, by due and
“ seasonable perseverance, they correct the
“ ill habits that closely adhere to the
“ mind. And when thus they begin to
“ be themselves, let them use their judge-
“ ment, and welcome*.

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* Nov. Org. Scient. Bac.

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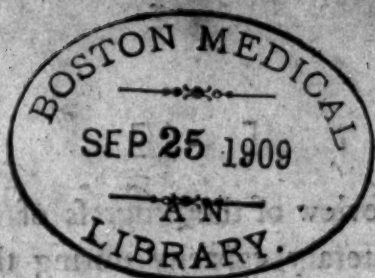
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INQUIRY
INTO THE STATE OF
MEDICINE.

CHAP. I.
*An Inquiry into the Causes which have retarded
the Progress of Medicine.*

IF we were inclined to take a survey of the progress of human knowledge from the earliest times to the revival of learning in Europe, we could discover in the mind of man an impatience and inattention to particulars, and a singular propensity to decide from the most imperfect observation of nature. The truth of this remark might be evinced by an examination of all the subjects which have occasionally solicited his notice; whether of primary or secondary consideration, of a civil or religious nature, respecting science or art, subjects of curiosity or of taste.

A brief review of the progress of man in his civil and literary capacity during this interval, will exemplify and illustrate our meaning. In his religion, even his character would discover to us his belief in oracles and divination, and in a plurality of divinities. The theism even of the philosophers will be found to be remarkably blended with superstition.

If we were at leisure to survey the progress of his literary history, we might discover his faculties engaged in very fruitless researches: the sciences would be confined to cosmogony, astrology, magic, and conjectural astronomy; and literature would assume the mystical form of hieroglyphics and a limited use of written characters.

The defects in the political and civil laws of this period, would discover in some measure an approximation to the natural progress of man; their different aspects would be the result of necessity, not of arbitrary establishment.

The former would observe a progression conformable to the following steps.

Chiefship is created in times of danger and alarm; and the chief, during the period of commotion, obtains a temporary pre-eminence, but is subjected to the controul of a council of elders. His authority eventually becomes transferred to times of peace. The next form it assumes is, its

con-

continuation for life, and its becoming hereditary. This is the progress of political law.

Municipal laws would be subservient to the following sketch.

Its first aspect is under the form of usages; then, moral precepts; next, written laws; lastly, municipal institutions*.

From this scene our attention is insensibly transferred to observe the numerous sects into which philosophy branched: and our curiosity is soon gratified by observing it divided into two sects; the Ionic school, or school of Socrates; and Italic school, or that of Pythagoras.

Our next step would be to examine the state of ethics, natural philosophy, and logic, as taught by these philosophers; and the result of it would be this, that they were involved in perfect obscurity. This, we should discover, was not peculiar to them alone; for all the liberal arts, and medicine among the rest, were in a similar predicament. A further attention would inform us, that most, if not all, the hypotheses in medicine, were chiefly transcripts from the splendid whims of the prevailing philosophy.

Notwithstanding this alliance between physicians and philosophers during these periods, nothing is more certain, than that, since the revival of learning in Europe, this state of coalescence

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* Bruce's First Principles of Philosophy.

by no means obtains: so that a person would be inclined to disbelieve that a Bacon and a Newton, those great enlightners of human reason, had ever existed; as no evidence can be adduced of our having profited by their rules in many of the sciences. For, it can be proved, that the medical profession remains in the condition of an art deprived of its science to analyze and improve it; as we cannot perceive the most faint appearance of the inductive philosophy of Bacon applied for that purpose, or Sir Isaac Newton's axioms of natural philosophy, which can be shewn to be universal axioms of nature.

We need not then wonder, that the most complete uncertainty as to the nature of the majority of the diseases which affect mankind, (viz. asthenic diseases), is the characteristic of our art; when the only engines in science, the sole instruments in discovery, are neglected; and while physicians, as if conscious of mental impotence, meanly skulk behind the shield of Sydenham^{as} as the standard of ultimate appeal *.

It need not be mentioned, that Sydenham's knowledge of diseases centered in those of a phlogistic nature only, and that his only plan of cure was the antiphlogistic. We shall not at present examine the comparative merits of the alexipharmac or phlogistic pathology; nor dwell upon the per-

* Brown's El. Med. p. 115, to 117.

* note - Boerhaave, Hoffman
& Cullen —

pernicious consequences of the latter, in the hands of different framers of medical hypotheses: we shall refer that to a subsequent part.

The reformation in philosophy brought about by the great ^{Dr. Francis} Bacon hath been remarkably fortunate in improving all the arts and sciences to which it has been applied: "Those sciences to which it has not been applied remain subjected to hypothesis and ^{conjecture} system*." This is the precise condition of medicine, so that it can be demonstrated, that the method of philosophical analysis, arrangement, evidence, and induction, have not hitherto been applied to it. Hence the fallacious nature of medical facts, the impure source of evidence, the artificial arrangement of diseases in nosological systems, and the false inductions which pervade and corrupt the profession.

Even at the end of the eighteenth century; a period when all the arts, as referable to safety, subsistence, accommodation, and ornament, are progressive; when commerce, from the extensiveness of its intercourse, is so unfavourable to indolence, by flattering the industrious with the pleasing prospect of a cessation from toil and the hopes of ease, and by inviting the adventurous to prospects of independence: At a period when freedom of inquiry obtains in every department of human knowledge, and inductive science

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hath

* Bruce's First Principles of Philosophy.

hath been found to apply to the different aspects of philosophy; when the modern European nations are making such progressive advances in the refinement of their municipal laws, the laws of war and of nations: At a time when criminal laws are subjected to censure and disapprobation for their irregularity and imperfections, and amendments in them become objects of primary consideration to legislators; when the principles of evidence in civil and criminal cases are subjected to the scrutiny of philosophy: Lastly, at a time when the objects of the art of criticism and belles lettres are beginning to be subjected to the analysis of their proper sciences; yet, the art of medicine, like the arts of China and ancient Egypt, assumes a stationary form.

In accounting for this aspect of the healing art, we are insensibly led to account for the stationary or progressive form of all the useful arts, which have always been more or less affected by the spirit of political laws. Thus we find, that making them hereditary in a family, which was customary in the East, was one of the most formidable obstacles to the progress of genius and the improvement of the useful arts. Accordingly, in the empires of Persia and China, and indeed in all the Eastern monarchies, the arts have been found to reach certain degrees of refinement

finement in a short space of time; and then become stationary.

The political laws in Greece had a different tendency; for there all the Eastern restraints were removed, the savages being incorporated with, and instructed by Eastern emigrants: hence the equable diffusion of the arts among this people. But the great error of the Greeks appears to be precisely similar to that which uniformly hath been found to corrupt medicine, viz. in making the study of the sciences and of the arts separate; which was fundamentally mistaking the import of each, as the dependence of the latter upon the former was overlooked: For, “ in the sciences, man is “ the interpreter of nature; in the arts, he makes “ use of the laws of the sciences, as the instruments for the attainment of his ends *.” Accordingly we find, that (in many instances) physicians have prosecuted the profession of medicine as mere artists, not as philosophers; because its improvement hath been left, like those of Greece, to the unguided genius of the artist, without the assistance of the philosopher. This truth is evinced by an appeal to the tenets of physic, which are proofs of the inadequate conceptions which physicians entertain of the nature of an art. As the knowledge of facts is indispensable in the creation of a science, so is the

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know-

* Bruce's First Principles of Philosophy.

knowledge of the foundations of rules in the practice of a liberal art. “ When we observe
 “ phænomena, and collect facts, we form a hi-
 “ story. When we discover the nature and re-
 “ lations of phænomena and of facts, we acquire
 “ a science. When we apply the result of science
 “ as rules of conduct, we practise arts *.”

These definitions are the most comprehensive of the subdivisions of human knowledge that I have met with, as they with great perspicuity and brevity point out the mutual subserviency of each, and the direct line and connection subsisting between all.

Inattention, however, to their direct import, hath been the cause of the greatest mischief, and hath had the most pernicious consequences in physic. Here rests the foundation of empiricism; here originates the contempt for reasoning, and for the knowledge of rules or theory. This is the great fountain of error in the profession, and the lawful mother of those perfidious debasers of human reason in it, the Dogmatists and Empirics. The characteristic of the one, is the adoption of rules, without proper data to establish them; that of the other, is a singular propensity to collect facts and observations, without making any proper deductions from them. In both, the deviation from the laws of nature is conspicuous; and

* Bruce's First Principles of Philosophy.

and in both, inattention to the first principles of science, and ignorance of their result, prevail.

Physicians have uniformly been disposed into these two departments of error; though the most unquestionable proofs have been adduced to demonstrate, that such a disposition derogates from their characters as observers of the laws of nature on which their art can be founded.

The causes which have contributed to retard medical improvement, are further legible in those which have retarded the progress of the other sciences and arts.

Lord Bacon has given a very full and particular detail of these in his *Novum Organum Scientiarum*. These were the most formidable antagonists he had to combat with in his great attempt to restore human reason; and there is nothing preposterous in the supposition that they will always operate in a greater or lesser degree, for man under similar circumstances will always be the same.

Having taken a retrospect of the general cause which has retarded Philosophy and Medicine, our attention is unavoidably transferred to observe the particular circumstances which have influenced their progression.

1. Love of system, and impatience of delay in the study of particulars.

To

To shew the force of this cause, the intelligent reader needs no proof from argument; for an appeal to the different aspects of natural philosophy previous to the application of inductive science to it, and to the present state of that department, is sufficient.

In the same manner, moral science has been acquiring more of the spirit of inquiry, though still it is influenced by hypothesis.

2. The propensity to account for ultimate facts.

This has been a great source of error in every department of philosophy, but remarkably in medicine.

3. The vain wish to demonstrate why causes operate, and not how they operate.

We find, that when Sir Isaac Newton discovered the general fact with respect to gravitation, and found that it was an universal property in matter to fall to a common centre, he paid the most implicit deference to the precepts of philosophy, which is derived from the observation of Nature, and which examines the properties and relations of her works to discover the laws which they follow. But when other philosophers endeavoured to refine upon his discovery, by referring the cause of this fact to ethereal emanations, &c. they lost sight of nature altogether.

However

However inattentive physicians have been to the import of this error in philosophy, I may venture to say, that no small part of the errors and endless ineffectual refinements in physic rest upon it. The incessant labour of accounting for symptoms, which is as fruitless and as endless as that of Sisyphus, originates from this source.

4. The inattention of physicians to the principles of philosophical analysis, arrangement, evidence, and induction.

5. An anxiety in physicians to establish the whims, errors, and opinions, of their respective teachers, rather than to advance and improve the profession.

This is an observation verified by an appeal to every age of medicine. It is not, however, an error peculiar to physicians; for it hath been found to tincture the opinions of most philosophers, and to mislead and infatuate their judgments. The moralists and metaphysicians, both ancient and modern, have been wonderfully assiduous in preserving this state of ebriety and infatuation.

6. The intermixture of the doctrines of physicians with the hypotheses of philosophy.

The truth of this remark we find realized in the opinions of Esculapius, whose chief excellence consisted in applying the principles of the
Eastern

Eastern philosophy, especially their magic, to solve the phenomena and detect the laws of animal-life.

The next personage of distinguished name to whom this observation applies, is the celebrated Hippocrates, whose precepts have been supposed to be supernatural. If the deifiers of this physician had but recollected, that his chief excellence consisted in borrowing the principles of the Pythagorean philosophy; at least in the establishment of that false and incongruous notion of critical days which have ever since pestered the schools of physic:—If they had been aware of the sophistical nature of his doctrines with respect to the different modifications of disease; in referring some to too great moisture in the system, others to driness, heat, and so forth; no such penetration surely would have been assigned to him. If it had been understood, that the basis of practice which hitherto hath been applied to those diseases, that are supposed to have plethora, mobility, irritation, and a variety of other pernicious tenets, for their causes, originated from Hippocrates *, no very extraordinary share of divination would have been perceptible in such an author. A better finishing stroke to his character cannot possibly be devised than by borrowing the words so happily used by the Lord Bacon.

* Brown's Lectures.

Bacon. " Let Hippocrates" says he " be next
 " called to the bar, whom we arraign, 1. As a
 " creature patched up of antiquity; and, 2. A
 " retailer of other mens knowledge, under
 " whose authority both Galen and Paracelsus ri-
 " diculously endeavour to shelter themselves like
 " asses under a tree. To do him justice, he
 " seems to have had his eyes at first perpetually
 " fixed upon experience; but then they are fix-
 " ed indeed! stupid and immoveable, without
 " ranging and searching for noble, manly, and
 " ^{comprehensive} full views: and afterwards, recovering a little
 " from this stupidity, he takes in certain idols,
 " though not those monstrous ones of theories,
 " but such as are more neat, elegant, and sur-
 " round the limits of history: and having drank
 " these in, he becomes swollen and sophistical;
 " and, according to the custom of the age he
 " lived in, wraps himself up in brevity: and
 " thus, as his followers imagine, utters oracles,
 " of which they are ambitious of being thought
 " the interpreters; whilst, in reality, he does
 " no more than deliver sophistry, by broken,
 " short, and interrupted sentences, so as to pre-
 " vent confutation; or else, in a haughty man-
 " ner, records such observations as are trite,
 " vulgar, and known to every rustic *."

The character which next demands our atten-
 tion

tion is Asclepiades, the creator of the Methodic sect. It is perhaps unnecessary to observe, that the period in which this physician flourished was that in which the Roman people had arrived at their summit of refinement and grandeur. At the same time, the Epicurean philosophy was much in vogue among the more fashionable part of the Romans: and it was a natural consequence, that a person more intent upon making his fortune by humouring the prejudices of the great than in studying nature, should adopt the language of the times, and apply the principles of the Epicurean philosophy to medicine; which actually was the case. In this respect he discovered a complete resemblance to the people he was incorporated with; for, let the merit of the Romans be ever so great in the arts of war, &c. this is an acknowledged truth, That
 “ their philosophy had no claims to originality,
 “ but was imperfect transcripts of Grecian opinions *.”

The physician of consequence next in the list is Galen; whose system, though partaking considerably of the opinions and whims of Hippocrates, lays claim for its chief dignity and importance to the principles of the Peripatetic and Eclectic philosophy which prevailed in his time.

The atoms of Democritus can be discovered
 to

* Professor Bruce's Lectures.

to be revived by the leader of the Chemical and Alexipharmac sect, in explaining the phænomena and laws of the animal-œconomy: And the taste for Mechanical philosophy, in the 16th and 17th centuries, can be perceived to affect the state of medicine in a very remarkable manner. For we can plainly discern a great propensity, among all physicians conversant in the science of geometry, to reconcile the phænomena and laws of the animal-œconomy upon mechanical and hydraulical principles; which appears first to have been suggested by the appearance of angles and lines, similar to mathematical ones, obtaining in the animal-œconomy.

The Boerhaavian opinions with respect to lentor and visciditv, can be traced to the Cartesian philosophy*; and the doctrine of spasm, tho' undeniably proved to be incompatible with truth and irreconcilable to reason †, “ appears “ to have its origin in a conceit of Van Helmont's ‡.”

Besides those dogmatical sectaries which we have mentioned, there have at all times been many in the profession who with-held their assent to the dogmatical principles of their cotemporaries or predecessors. The prosecution of the art in the temples among the ancient Greeks, by

* Cullen's Lect. † Elem. Med. Brun. cix. ad cxvii.

‡ Brown's Lectures.

by recording the several cases and cures of diseases treated there by the priests, and applying similar remedies to similar cases, is the first instance of empiricism of which we have any account.

After the dogmatic plan of Hippocrates appeared, and was universally received in Greece for the course of some centuries, it would seem, that the efforts of the empirics had been checked, though not suppressed, by the splendour of his system. At last, however, in the reign of Ptolemy Philadelphus in Egypt, we find empiricism professed and avowed. Serapion stands forth as the champion in its cause. Galen's doctrine, superseding all others during the decline of the Roman empire, and in Arabic translations preserved through the dark ages, till, upon the taking of Constantinople, it was restored to the western part of Europe, was so implicitly followed, in consequence of an universal languor in literature and the spirit of inquiry, that it obscured all other sects, and prevailed over empiricism. In the dark ages, however, of the western church, where, with other branches of knowledge, this medical work must have been altogether lost, it is not to be supposed that they wanted some form of physic: and the only one that could have occurred is that which naturally suggests itself to a rude people, viz.

viz. a sort of attempt to cure diseases from certain instinctive impressions and random trials. This is natural phyfic, in which the good women are the principal personages of the faculty. And while the chief occupation, in such a state of society, of their husbands and sons, is war; this opposite department, of restoring health and averting death, would be handed down to the daughters, and so descend to succeeding ages. Nor is this natural state of phyfic effaced in more enlightened times by the authority and influence of a regular faculty. It prevails at present in Britain; and often boasts, and we believe justly, of making cures where the regular practice had failed. It must, however, be under less control in times of general ignorance; and among a rude people at any time. Accordingly its present state in the Highlands of Scotland, of Wales, and in the wild parts of Ireland, must bear a great resemblance, in all its principal features, to the phyfic practised in the dark ages. From what has been said, it will appear, that this natural phyfic may be in a more pure or corrupted state. In every nation into which an art of phyfic has been introduced, and a regular practice in that art takes the lead, its influence must in some measure, and sometimes often in a great measure, extend itself to the natural phyfic.

B

Hence,

Hence, among the good women, as well as gentlemen of the faculty, vomiting, purging, and bleeding, will be the panacæum. But, in the less contaminated state of natural physic, more dependence will be placed in the use of herbs and certain other productions, and in certain formulæ transmitted from former times, than in the destructive evacuator powers we have mentioned: And therefore, though we cannot give our testimony for its great efficacy, we are at full liberty to give a declaration in favour of its innocence.

To this account of empiricism we have only to add, that, in the hands of Paracelsus and his successors the chemical practitioners, empiricism again took possession of the schools. The theory of the chemists was too narrow to extend to a full dogmatic plan. They saw its imperfection in principle, and deficiency in application; and they professionally gave themselves up to an inquiry into every thing that experience and observation had found effectual in the cure of diseases. Paracelsus had recourse to the professors of the natural form of medicine. He consulted old women and quacks; and declared he would take a cure from any person, even from the devil.

We next find the discovery of the circulation, and the influence of Boerhaave, giving another
check

check to natural physic in its pure and genuine state. And the great name of Doctor Sydenham, while his doctrine laid the foundation of dogmatic physic, at least in the practical part, has also, when viewed in a different light, given sanction to empiricism. And it is to a comparison between the efficacy and simplicity of his plan of cure with the complicated indications of the dogmatists in the schools, that the general tendency to empiricism, which distinguishes the practice in England, is owing. Accordingly, what has much contributed to the depreciation of dogmatism, is the prevalence of empiricism among many physicians, and the corrupted natural physic among other persons who do not regularly belong to the profession.

From this selection of leading circumstances it will evidently appear, that the adoption of, and reasonings from, false principles, from the infancy of medicine, as taught in the Efeulapian school, to the present times, will sufficiently account for the errors of the sects; and their inattention to and neglect of complete models and processes of inductive inquiry, exemplified sufficiently in the writings of those great ornaments of human nature, Galileo, Torricelli, Pascal, Bacon, and Newton, will account for their subsequent wanderings from the laws of nature, and the stationary aspect of the profession.

C H A P. II.

Of the Grounds of Hope for the further Advancement of MEDICINE.

THE difficulties of our profession, which are manifest to every person the least conversant in it ; the trivial advantages which have accrued to it from the laborious efforts of medical writers ; the endless folios which have been written on the distinctions and cure of disease ; to which may be added the continual embarrassment and universal perplexity attendant on the practice of medicine ; should have informed us of this melancholy fact, that we are travelling in a wilderness where there exist but faint glimmerings for extrication, and where the prospect leads to despair ; were it not an “ argument of hope, “ that some of the things already discovered are “ such as, before their discovery, did not enter “ into mens minds even to suspect ; so that any “ one would have despised them as impossibilities. For it is an usual way with mankind “ to form conjectures of new things according “ to the examples of old ones, and according “ to the opinion thence preconceived and entertained : which is a very fallacious manner of “ judging. For many particulars, derived from “ the

“ the fountains or origins of things, do not flow
 “ in the ordinary channels.

“ So if a man, before the discovery of ord-
 “ nance, should have thus described the thing by
 “ its effects; viz. that there was a certain way of
 “ battering down walls and the strongest fortifica-
 “ tions at a great distance, the minds of men would
 “ have run upon multiplying the force of their
 “ common engines of war, the known battering-
 “ rams and machines, by the means of weights,
 “ wheels, and other mechanical powers. But
 “ scarce any would have suddenly fallen upon
 “ the invention of raising a fiery wind, that
 “ should blow out of a tube with such prodi-
 “ gious expansive violence, as to produce the
 “ above-mentioned effect: an obvious exam-
 “ ple thereof having never been seen, unless
 “ perhaps in earthquakes or thunder-storms;
 “ which, as being grand works in nature, men
 “ would presently have rejected as inimitable by
 “ art.

“ So likewise, before the invention of silk,
 “ if any one should have said there was a certain
 “ way of making a certain cloth for apparel and
 “ household-furniture, far exceeding that of
 “ linen or of woollen in fineness, strength, gloss,
 “ and softness, men would immediately have
 “ fallen to conjecturing about some vegetable
 “ silk, the finer furs of animals, or the feathers

“ and down of birds, without ever dreaming it
 “ should proceed in such plenty from the anni-
 “ versary spinning of a small worm.

“ And if any one should have dropped a word
 “ about such a worm, he would certainly have
 “ been laughed at as the projector of a new
 “ spider-work,

“ So, again, if, before the use of the compass,
 “ any man had said, that a certain instrument
 “ was known for exactly discovering the quar-
 “ ters and points of the heavens, mens inven-
 “ tion would hence presently have run upon a
 “ more exact construction of astronomical in-
 “ struments, and various ways of applying them:
 “ But that any thing should be found, the motion
 “ of which had such a correspondence to the hea-
 “ venly bodies, and yet the thing itself no ce-
 “ lestial, but only a bare terrestrial, stony, or
 “ metallic substance, would have seemed abso-
 “ lutely incredible. Yet these and the like parti-
 “ culars have been hid from mankind for so
 “ many ages; and at last were not discovered
 “ by philosophy or the rational arts, but by
 “ chance or accident; and are of such a nature
 “ as to appear perfectly foreign and remote from
 “ the things known before, so that no previous
 “ notion could any way lead to them.

“ Whence there is great room to expect, that
 “ there still remain in the bosom of nature many
 “ things

“ things of excellent use, that have no man-
 “ ner of relation or analogy to the things al-
 “ ready discovered, but lying perfectly out of
 “ the road of the imagination; and which, tho’
 “ hitherto unknown, may doubtless, through
 “ numerous revolutions and successions of ages,
 “ be one time or other discovered, as those
 “ above-mentioned have been. But, by the me-
 “ thod we propose, they will more readily and
 “ suddenly be represented and anticipated at
 “ once.

“ It may perhaps seem incredible to many, that
 “ there should still remain undiscovered any confi-
 “ derable number of useful and beneficial works;
 “ and, again, stranger that they should hereafter be
 “ discovered of a sudden; and great, to be sure, will
 “ be the wonder what these particular works can
 “ be. The direct answer is, That as the ignorance
 “ of mankind has led them into despair, so know-
 “ ledge will lead them out of it into the regions
 “ of hope, or rather of certainty. But who-
 “ ever duly considers it, will not find it strange,
 “ if our method of interpreting nature prevails,
 “ that there should, in a small compass of time,
 “ many new and useful inventions grow up: for
 “ the births of knowledge are quick; but the
 “ births of time are slow. And all the noble in-
 “ ventions at present in use rather proceeded from
 “ accident, and random trials, or conjectures,

B 4

“ than

“ than from any previous light of knowledge ;
 “ whereas the method of discovering by induction
 “ is certain, regular, and direct, without waiting
 “ for accidental hints and lucky chances. There
 “ are also other inventions of such a kind as to
 “ shew, that men may pass by and overlook
 “ noble discoveries which lie before their feet.
 “ For though the invention of gunpowder, silk,
 “ the compass, sugar, paper, &c. may seem to
 “ depend upon certain properties of things
 “ and of nature ; yet, doubtless, the art of
 “ printing contains nothing that is not open, and
 “ in a manner obvious.

“ And in this course of invention the mind is
 “ frequently so perverse, and childish, and con-
 “ tradictory, as first to distrust, and presently after
 “ to despise, itself : for men first conceive it in-
 “ credible that any such discovery should be
 “ made ; but after it is once made, they again
 “ think it incredible that it was not found out
 “ before *.”

So likewise, if a person had described the pos-
 sibility, nay practicability, of applying the prin-
 ciples of inductive philosophy to an art, which
 is wholly acknowledged to be rather the result
 of conjecture than demonstration :—If he had
 hinted the possibility of interpreting the infi-
 nitely modified phænomena of health and dis-

* Nov. Organ. Scient. Bacon.

ease on Sir Isaac Newton's axioms of natural philosophy, which hath actually been executed; before such an event, he would undoubtedly have been considered as the builder of castles in the air.

All these discoveries afford grounds for hope; so that we are sufficiently advanced in our subject to authorise our adoption of another important precept of Lord Bacon: "'Tis madness, and a contradiction, to expect that things which were never yet performed, should be effected, except by means hitherto untried *."

The numerous arts which natural philosophy and chemistry have contributed to perfect, would incline us to this belief, That we have neglected advantages which hitherto have not been explored, and assistances which a greater attention to science and philosophy may contribute to afford.

Will it not be allowed, that the moralist, the student in jurisprudence, and the politician, receive essential benefit from the history of human nature?

Will it not also be admitted, that the pneumatologist, the logician, and speculative geometrician, receive important advantages from the history of the human understanding?—Without these helps, we can never expect to make any great

great proficiency in the sciences which relate to the intellect and will of man.

Would the increments and decrements obtaining in the planetary system, have been with any sort of precision ascertained, had it not been for the assistance of fluxions, brought to light and fostered by the matchless capacity of a Newton? Without these or similar means, what would our understanding avail us in the contemplation of this and other sublime departments of nature? We should very probably, at this very advanced period of society, be revolving in the vortices of Des Cartes, and absorbed in all the wild aberrations of his imagination, had not this immortal personage chalked out a different path for discovery, by proper helps and a becoming diffidence in the powers of the understanding.

“ Neither the hand without instruments, nor
 “ the unassisted understanding, can do much;
 “ they both require helps to fit them for business;
 “ and as instruments of the hand either
 “ serve to excite motion or direct it, so the instruments
 “ of the mind either suggest to, or
 “ guard and preserve the understanding *.”

Nothing more should point out to physicians the importance of philosophy than the numerous assemblage of errors and mistakes previously noticed,

* Nov. Org. Scient.

ticed, (Chap. I.) If it were only in compliance with the singular excellency of the reasonings of inductive philosophers; if it were only on account of the aids which the understanding receives from the precepts of philosophy; one would think physicians would become philosophers. For it is an unquestionable truth, that the sagacious observer, the accurate reasoner, and the cautious believer, have always been inductive philosophers.

If we, on one hand, view the extensive intercourse which medicine has with the multifarious phenomena of nature; and, on the other, consider the relapse from wonder and surprise which happens after the contemplation of a new phenomenon has been followed by the discovery of the law by which that phenomenon acts; from these considerations the importance of philosophy must appear in a very clear light.

If it be added, that the most complete relief from prejudices, which an acquaintance with the more general operations of nature serves to create, is its consequence; its excellence must be estimated not in a limited point of view. Further, if we compare the subjects of our profession with those of natural philosophy, we shall have additional evidence of the importance of those auxiliaries which contribute to perfect us in intelligence,

telligence, to familiarize us with nature, and to promote the love of truth and inquiry.

It certainly is more proper to premise an acquaintance with “ natural philosophy, the province of which it is to discover the laws, and explain the phænomena, of the sensible motions of the insensible assemblages of inanimate matter, than to set out with the several subdivisions of the profession of medicine, viz. physiology, chemistry, and botanical philosophy, the province of which is to discover the laws, and explain the phænomena, of the insensible motions or appearances of the sensible assemblages of inanimate nature *.”

It surely must be admitted, that the human mind should first of all be initiated in, and conversant with, the subjects which admit of complete perception; before we travel over more intricate paths, where our senses avail us little in observing, and perception itself is so incomplete.

“ A second cause, says Lord Bacon, of very great moment, is, that through all those ages wherein men of genius and learning principally, or even moderately, flourished, the smallest part of human industry has been spent on natural philosophy; though this ought to be esteemed as the great mother of all the sciences :

* Professor Robinson's Lectures on Natural Philosophy.

“ sciences: for all the rest, if torn from this
 “ root, may perhaps be polished and formed for
 “ use, but can receive little increase. But let
 “ none expect any great promotion of the
 “ sciences, especially in their effective part, unless
 “ natural philosophy be drawn out to particular
 “ sciences; and again, unless these particular
 “ sciences be brought back to natural philo-
 “ sophy. From this defect it is that astronomy,
 “ optics, music, many mechanical arts, medi-
 “ cine itself, rise but little above their founda-
 “ tions, and only skim over the surfaces and va-
 “ rieties of things; because, after these sciences
 “ are separated and formed, they are no longer
 “ nourished by natural philosophy, which would
 “ give them new strength and increase; flowing
 “ from the causes and genuine consideration of
 “ motions, light, sounds, the texture and struc-
 “ ture of bodies, the affections and intellectual
 “ apprehensions. No wonder, therefore, if
 “ the sciences thrive not, whilst they are sepa-
 “ rated from their roots *.”

It may be considered as superfluous to insist
 much on the importance of the first principles
 of philosophy, or logic, which is defined to be
 “ the science of observing nature †,” the source
 from which the maxims of legitimate induction
 springs,

* *Novum Organ. Scientiarum.*

† See Bruce's *First Principles of Philosophy.*

spring, and mathematics as preliminaries to natural philosophy; as it is obvious to every person, that the farmer should have a previous acquaintance with the instruments of his profession before any efforts are made to cultivate his soil: for the mind, without these lights in the prosecution of natural knowledge, may be compared to a “ mirror, the surface of which requires levelling and “ polishing, in order to be discharged of its false “ imaginations and perverted notions, before it “ can be set to receive and reflect the light of “ truth and just information *.”

It will, therefore, be superfluous to insist any further on the indispensable necessity of studying with diligence that department of knowledge, the province of which is to fulfil the preceding indications; to view man in the light of an intelligent being, and to afford rules for the successful conduct and cultivation of his understanding.

If this be the province of logic, to guide and direct the intellect of man, and to afford rules for the successful contemplation of nature; will it not be granted, that the good consequences resulting from such a source, would be of very particular advantage in the profession of medicine? where it is incumbent on us, by every tie of duty we owe to ourselves and our fellow-creatures, to employ every additional auxiliary in its improve-

improvement; wherever the precepts of science chalk out the path and point to us the means. How fundamentally have physicians wandered from the import of these precepts ! For they have prosecuted that aspect of nature which hath a reference to their profession, as if it had been a study *sui generis* ; as if no preparatory, no elementary branch of philosophy was necessary to the successful prosecution of so intricate a department.

However, we rest no inconsiderable part of our hope for the advancement of medical philosophy, on the foregoing elementary sciences. Which, if steadily pursued, will enable us to observe the infinitely varied aspects of life with precision and judgment ; to reason justly from these appearances, and to apply these reasonings with confidence to the practice of our art. By this mode of proceeding, we shall stand a fair chance of extirpating those unnatural distinctions in the profession, of Dogmatists and Empirics ; and of obtaining the indispensable qualifications which should centre in the character of a physician, those of historian, philosopher, and artist. By these means the great *desiderata* of our profession will be secured, and the reproaches which it hath suffered mitigated, nay, obviated ; so that we may with equal justness say, as Lord Bacon did, when he compared his philosophy

philosophy with that of Aristotle ; using the words of Philocrates when he differed from Demosthenes : “ Wonder not, Athenians, that I differ
 “ from Demosthenes ; for he drinks water, and I
 “ drink wine : ” or in his own words, “ For
 “ all mankind, both ancients and moderns,
 “ have drank a crude liquor in the sciences, as
 “ a water that either flowed spontaneously from
 “ the understanding, or was drawn out of the
 “ well by the wheels of logic : whilst we drink
 “ a liquor, and offer it to others, prepared from
 “ an infinite number of grapes, ripe and season-
 “ ably gathered in clusters, somewhat squeezed
 “ in the press ; and lastly, purged and cleansed
 “ in the vessel.”

These, with numerous other motives, would incline us to inculcate and admonish, as a ground of solid hope, the great importance of the principles of natural philosophy, and of the logic of the illustrious Bacon, to physicians ; in order that they may analyze the various powers operating on the living body, and productive of the phenomena of life ; examine with precision the phenomena descriptive of these powers ; perceive the coincidences of these phenomena and powers, together with their reverse ; and ultimately deduce philosophically from them, in order to apply rules of conduct for the preservation of health and cure of disease. Thus we shall attain

attain the summit of our mission as artists, whose office it is to apply the laws of nature to the useful purposes of life.

C H A P. III.

Instances of legitimate Inquiry in Morals, Natural Philosophy, the Logic of Nature, and Geometry; assumed as standards for appealing to, in any attempts to detect the Laws of Nature in the Animal Oeconomy.

THE constant view which physicians have taken of the animal body, as if it were not made up of a complete indivisible whole, but of distinct parts, the operations of which were wholly independent of each other; their uniform and universal propensity to consider man in his most complex state, prior to any survey of his more simple and unbiaſſed state; or, to render the matter more clear, their attention to human nature in a state of diſeaſe, previous to the moſt complete examination of it in a ſtate of health, and of diſpoſition to diſeaſe; appear to be exceedingly unphiloſophical.

It is a proſpect of the animal-oecconomy borrowed from no department of philoſophy; which the following arguments will, I expect, prove.

C

I. Would

1. Would it not be the highest species of folly, in the student of the laws of nature and of nations, to prosecute this branch of knowledge without any, nay, the most complete attention to the principle from which it springs, and of which they are only a more extensive transfer, viz. man as a moral agent, or the principle of morality? How fruitless would the presumption be, to prescribe rules of conduct for citizens and nations, previous to ascertaining the principles of conduct which ought to actuate men as individuals? It certainly would be incumbent on us to ascend from the more simple aspect of this branch of moral knowledge, to the more complex. It would surely be an indispensable preliminary for us to have strictly philosophical ideas of moral perception; then of moral law; and ultimately, by extending the principle of justice, ascend to the rules of conduct, or laws, which ought to regulate men as individuals, as citizens, and lastly, as nations.

2. Would it not be the highest degree of absurdity and presumption, to prosecute with inconsiderate ardour the science of metaphysics, without a constant reference to, and perfect analysis of, the sentient and intelligent faculties of man? If we wished to rescue this department of philosophy from the obscurity, reproach, and pedantry, in which it has hitherto been involved;

if

if we were inclined to free this important branch of intellectual science from the discredit brought upon it by the Cartesian school ; if philosophers discovered a desire to confer upon it the important office of discovering the most general conceptions which the human mind can form of the foundations of the sciences and arts, or the method by which the mind approaches to the most general facts on which the sciences and arts rest ; lastly, if we mean to confer on it the important office of applying philosophy to the belles lettres, we should premise an analysis of the faculties previously taken notice of.

3. Nothing certainly would appear more preposterous, than a person's applying himself to spherical trigonometry, the different sections of the cone, and indeed every department of transcendent geometry, prior to an acquaintance with the elementary part of this science, the properties of a straight line and pure circle. Surely, things where a facility to comprehend obtains, should be premised to complexity, or elementary to the more advanced departments of philosophy.

4. The celebrated method of the mathematicians is strictly conformable to this rule: " Methodus mathematicorum, puto ordinem, quo in tradendis dogmatibus utuntur mathematici, incipit a definitionibus; pergit ad axiomata; his superstruit theoremata atque problemata; quibus

“bus corollaria, & scholia, ut res postulaverit,
“annectit *.”

5. The truth of our proposition is clearly evinced in the circumstances which led the illustrious Newton to discover the laws which regulate the planetary system: For we find this sublime discovery, which hath fully immortalized his name, originate from the simple fact of body when unsupported falling to the ground, aided by the phenomena accompanying terrestrial projectiles. This simple fact, and these analogous phenomena, he transferred to solve the motions of the heavenly bodies, and the paths they described.

The justness of the analogy, and the important truths they have revealed, all grant and admire.

6. An additional strength to the justness of our remark, arises from an accurate survey of the method and arrangement of natural philosophers: For it is indispensable in this science, that matter simply and abstractedly, or the metaphysic of body, matter as occupying space, gravitating in space, and susceptible of motion through space, should be involved in the preliminaries to the investigation of its infinitely modified aspects. Having discovered these general facts with respect to body, viz. body gravitating in space, and susceptible

* Mathesios Univerf. Wolfii.

ceptible of motion through it, a solution is afforded to some of the more grand phenomena of nature, in the astronomical phenomena, in the phenomena of projectiles, the art of building, the different departments of mechanics, hydrostatics, hydraulics, and pneumatics. All these departments of nature are proofs of the laws of gravitation, simply, or combined with a projectile force.

We are therefore in every department of natural, moral, and intellectual knowledge, as well as in the science of quantity, furnished with important analogies, and principles, highly worthy of imitation and adoption in our profession.

In all these sciences the method of nature is conspicuous; as they have uniformly begun with the investigation of the more simple aspects of it, then gradually ascended to its more complex state.

It certainly is a subject highly worthy of inquiry, to discover, whether our profession is susceptible of a similar mode of investigation. And, if the most distant probability of the practicability of such a scheme was the result of it, we should discover no discordance, but rather a compliance, with the precepts of philosophy, were we to adopt the following steps.

First of all, let us begin with observations on the simple phenomena of health, together with the

consideration of the several powers operating upon us in that state; and creative of its phænomena. In the next place, let us ascend to the phænomena accompanying deviations from this state, or the state of predisposition to disease, and the powers productive of it; and lastly, to disease itself: as the former appears to exhibit to us the most simple, the latter the most complex phænomena, as referable to man in a state of existence.

This is a view of the animal-œconomy equally new and scientific. The truth of the former is evinced by a reference to the uniform practice of physicians; who have been found to accommodate nature and their reasonings to system, not their reasonings and systems to nature: that of the latter is realized by its complete approximation to the several aspects of science, the outlines of which we have detailed at considerable length in the preceding parts of this chapter.

This is the view of medical doctrines lately offered to the world by Dr Brown. It is only the most slight degree of justice due to this eminent author, to observe, that his view of human nature in a state of disease, is the result of his progressive observations from health through the different stages of predisposition, to its ultimate progress in the attainment of idiopathic disease. That it is strictly compatible with the first principles of philosophy, an appeal to every aspect

pect of science, either as referable to material, or intelligent nature, will clearly evince.

That he has accomplished its end, the universal success attendant on his practice in his own hands and those of his several admirers, is a complete demonstration; as “the end of science
“ is to create and to improve the arts *.”

It is by this mode of inquiry, I believe, alone, we shall be enabled to ascertain the causes of disease, interpret its phænomena, and deduce rules for removing it. Upon this principle we may hope to be of essential service to our profession, in accumulating useful facts, which are indisputably much wanted, and in forming just and natural deductions from them. In compliance with this precept, we shall unite the observing and rational faculties, and accommodate our conduct to that of the bee. “For it appears
“ that those who have treated the sciences, were
“ either Empirics or Rationalists. The Empi-
“ rics, like ants, only lay up stores and use
“ them; the rationalists, like spiders, spin webs
“ out of themselves: but the bee takes a middle
“ course, gathering her matter from the flowers
“ of the field and garden, and digesting and
“ preparing it by her native powers. That, in
“ like manner, is the true office and work of
“ philosophy, which, not trusting too much to

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“ the

* First Principles of Philosophy.

“ the faculties of the mind, does not lay up the
 “ matter afforded by natural history and mecha-
 “ chanical experience, entire or unfashioned,
 “ in the memory ; but treasures it, after being
 “ first elaborated and digested in the understand-
 “ ing : and therefore we have a good ground of
 “ hope, from the strict union of the experimen-
 “ tal and rational faculty, which have not hi-
 “ therto been united *.”

A constant reference to the principle of life in health, and nice observance of deviations from this state, will enable us to reason justly with regard to idiopathic disease.

The analogy of the flight of a bomb, which Newton applied to delineate the paths of the planetary bodies, hath an affinity to the proposition we wish to inculcate. For if we observe accurately the causes productive of slight deviations from health, and the appearances denoting these deviations, we may with confidence transfer them to idiopathic disease, the phenomena of which imply neither more nor less, than that causes of a similar nature, but with greater energy, contribute to create it †.

By this manner of proceeding we may avoid the multiplication of causes, give a just interpretation of effects, hope to discover the laws of nature which regulate the animal-machine, and accommodate

* Bac. Nov. Org.

† Brown's Lectures, and Elem. lxvi. to lxxviii.

commodate our reasonings to those universal axioms established by Newton.

None of the phenomena of nature would be involved in such intricacy if we would avail ourselves of the proper instruments of the understanding, dispense with relying too much upon it when unassisted, and prosecute her operations in a similar manner; viz. first of all to begin with her more simple operations, and ascend gradually and with patience the scale of intricacy. For the powers of the understanding are as unbounded when properly assisted, as they are truly weak and helpless when left to themselves. To which purpose Lord Bacon truly observes, "That the root of all the mischief in the sciences is this, that, falsely magnifying and admiring the powers of the mind, we seek not its real helps *."

In order to remedy this, he wrote his admirable method of induction, which is full fraught with these precepts. But the infinity of important truths, and the successful efforts of natural philosophers, as resulting from this model, afford a complete demonstration, and an adequate conception, of its excellence, and of the vastness of the immortal author's designs. Without this safe monitor and indispensable pilot, it is more than probable that a Gilbert could not have contributed much to assist the navigator, a Newton the optician.

* Nov. Org. Scient.

cian and astronomer, or a Franklin the civil, naval, and military architect: Or, to adopt more accurate language, the complex and subtle phenomena of magnetism, of light, of planetary motion, and the more awful and tremendous appearances of thunder and lightning, would never have been investigated with that beautiful precision and artful manner displayed in the writings of these great men.

C H A P. IV.

An Attempt to prove, that Nature operates as uniformly and universally in the Animal-economy as in any department of the material world.

WE are led, by every preceding consideration, to this conclusion, That every wish is attainable, and every object to be accomplished, by the use of the beneficial influence of Mechanical Philosophy, together with its truly important and indispensable appendages, the Logic of Nature and Mathematics. It is the business of the former to observe the phenomena of the universe with accuracy and precision; to arrange these according to their generality; and to deduce with caution. Subjects which admit not of complete observation are ascertained by the more sure test of
expe-

experiment. This is varied, or, to use the words of the illustrious Bacon, tortured, in order to obtain a clear and perfect result. The natural philosopher is never astonished at the novelty of any phænomenon ; for he is aware of the infinite diversity of the appearances in nature. Novelties affect him in no other manner but as confirming him still more in some general law of nature, or as disproving an hypothesis. There is a maxim of very considerable moment constantly held in view by the natural philosopher, That Nature in all her operations discovers a wonderful degree of uniformity and universality.

With him this tenet, which is constantly had recourse to, in a great measure suspends the expectation of a notion very current among physicians, that the laws of nature are liable to exceptions.

Nothing is more familiar in the profession than the hearing a medical person relating a phænomenon or fact in nature, and at the same time declaring it not to be referable to any general law, or any fixed principle : consequently it must be an exception ; or, in other words, it amounts to a belief, that nature operates by partial, and not by universal laws, in the animal-œconomy.

This is a doctrine as prevalent as it is repugnant to truth and philosophy. It is an assumption of the most pernicious tendency, and warranted

ranted by the analogy of no branch of nature. Thus, in contemplating the solar system, we are at a loss to which we should prefer the tribute of our admiration, whether to the grandeur or to the astonishing uniformity of their phenomena.

It hath been discovered, “that the primary planets and comets describe round the sun, and the secondary planets round their respective primary planets, areas proportional to the times *.”

That “the orbits described round the sun and round the primary planets are ellipses, having the sun or primary planet in the focus †.”

“That the squares of the periodic times of planets revolving round common centres, are proportional to the cubes of their mean distances ‡.”

If we transfer our attention to that aspect of matter the agency of which is peculiarly confined to the organ of seeing, we can plainly discover, that the same uniformity and universality obtain here as in the preceding department of nature, as no exceptions to any law have hitherto been clearly demonstrated; for it is known to every optician, That

“Light is propagated in straight lines ||:”
That “the angles of incidence and reflexion are equal:”

* Kepler's 1st Law.

† 2d Law.

‡ 3d. Law

|| Optical Law.

“ equal * :” That “ when a ray of light passes
 “ obliquely through any boundary of transparent
 “ medium, there is a constant ratio between the
 “ sines of the angles of incidence and refraction,
 “ viz. as 3 to 2 † :” That “ the rays of light have
 “ different degrees of refrangibility, the red least,
 “ and violet most of all ‡.”

In like manner, a survey of the magnetical and electrical phenomena and laws gives additional strength to the assumption, that Nature's laws are characterised by nothing exceptionable, but that we are instinctively led to this belief, that the Creator's works are subservient to no motive of caprice, which the idea of exceptions strongly indicates a belief of; but that a pleasing uniformity is discernible in every department of the universe. Thus, after having examined the apparently unaccountable phenomena of magnetism and electricity by the the strictest analytical scrutiny, and to this having added and connected mathematical evidence, their infinitely modified phenomena have been found to be reducible to a few simple laws; viz. That “ the magnetic fluid repels its own particles after a certain law, or at a certain distance || :” That “ it attracts iron particles by the same law § :” That “ it moves with difficulty through soft iron, “ more

* 2d Law.

† 3d Law.

‡ 4th Law.

|| 1st Law.

§ 2d Law.

“more so through soft steel, and still more so through air *.” What applies to magnetism hath been found to be equally applicable to electricity; with this difference only, that what is hypothetically true with regard to the former, is physically so with respect to the latter.

No man in his senses, unless a professed disciple of Pyrrho, could doubt of the validity of the foregoing laws in the several subdivisions of nature, or that they were liable to exceptions. For all the facts leading to the arrangement have undergone so strict an analysis, and the induction which leads to the law in each is so complete, that we are forced to lend our assent to their truth.

Hitherto we have exemplified the grand truths resulting from the application of inductive science to some of the most intricate aspects of material nature: In each of which the most complete conformity to the precept held forth by the great Reformer of human knowledge obtains, viz. the torturing her, as in each a perfect and clear result is discernible: for every apparently anomalous phenomenon is perceived to have some relation to another; consequently adds one to the assemblage of facts.

From this scene of elegant contemplation we are irresistibly solicited to turn aside our attention for a few minutes to medicine, where a dis-

language from that we have been adopting is held forth.

Instead of uniformity and universality obtaining in the operations of Nature, and being one of the most striking characteristics of her laws, the doctrine of exceptions to her more general laws is constantly insisted upon, and with great pretensions to erudition inculcated, whenever any anomalous phænomenon, or fact repugnant to a prevalent hypothesis, obtains. Thus we find the notion of plethora hath been universal among physicians; from the time of Hippocrates to the present, especially in the following set of diseases; gout, epilepsy, palsy, apoplexy, hysteria, asthma, &c. Consequently the practice resulting from this supposed principle consists of purgation, inanition, bleedings, together with a close adherence to a vegetable diet, and complete abstinence from all kinds of animal-food. This is not the place to appeal to argument or fact in order to evince the highly pernicious tendency of the antiphlogistic practice, when applied to these forms of disease *. It is only necessary to observe, that the most unquestionable instances are adduced, even by those who support with superstitious credulity the doctrine of plethora, of the tonic plan of cure being completely adequate to the removal of epilepsy, asthma, &c. These, however, are
confi-

* See the El. Med. from par. ccxci. to ccxiv. and from ccv. to ccxiii.

considered as solitary facts, and given, forsooth, as exceptions to their favourite plethora; which is still retained in practice, together with the pestilential blasts which issue from its applications.

It hath been proved by a very copious induction of facts, aided by completely demonstrable arguments, that the plethora alleged in these diseases is truly ideal, and that the exceptions to this hypothesis are the only grounds upon which these diseases can with any confidence * be explained.

The doctrine of exceptions may with justice be referred to inadequate perceptions of the import of the first principles of science, as it requires not the aid of demonstration to prove it to be incompatible with truth, pregnant with mischief, and attended with the most baneful consequences in the practice of the profession. It is unquestionably the pillar upon which empiricism rests, as it strongly favours the most torpid inaction in the accomplishment of full and manly views, forms an unsurmountable barrier to the generalization of facts, and to the important deductions naturally resulting from them.

From a long train of experience, we are naturally led to expect, that a dose of opium, given to one man, will, in a state of great debility, moderate

* Brown's Lectures on the Practice of Physic, and the place of his published work last quoted.

moderate the frequency of his pulse, allay delirium, relieve and abate pain, afford sleep and refreshment, and give recreation and a greater degree of excitement to the whole system. Now, that the same dose, as it is commonly asserted, given to another person under the same circumstances, would not be attended with similar effects, is an inadmissible supposition. A person may with equal confidence expect an exception to any of the preceding laws in astronomy, optics, or electricity, as to this last.

It may be proved *a priori*, and daily experience countenances the conclusion, that the use of a full and generous diet of animal-food, the stimulus of heat not carried to excess, that of spirituous liquors, and other powers that operate on the same principle, will inevitably plunge a person into a phlogistic disease. And it is from this very source that peripneumony, synocha, and rheumatism, originate*.

If the examples adduced are true, and which can be as little doubted as that "light moves in straight lines," or any other optical truth, a law of nature is discovered. It would be completely ridiculous and absurd to expect an exception to this general fact, by supposing that a person would fall into a dropsy, into a dyspeptic state, or hazard a dangerous typhus, from

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pursuing

* Elem. Med. Brun.

pursuing a similar mode of life with a person who fell into a peripneumony, &c.

Indirect causes of debility may intervene, and contribute, with others, to produce the last-mentioned diseases. But that is no exception. For the diseases first mentioned do not arise from the same powers operating in the ultimately high degree in which they produce debility, but from their operation in a degree in which they only produce vigour in excess. This conclusion rests not here. It is extended to all idiopathic diseases. And we are taught, that all these arise from one or other of two sets of powers, excessive or deficient stimulants. The phlogistic form is induced by the former, and the asthenic by the latter. And their difference from each other is, as we shall have occasion to say, only a difference of degree, they being all stimulant in kind. All this he has proved by the most complete process of inductive reasoning. There is not a particular in the whole extensive survey, that has not been subjected to an accurate examination, before any attempt was made to apply it to the general principle. He had been biaised to the belief in exceptions; he searched for them, and found nothing but fact crowding on fact to establish the general law. And while the causes of the two forms differ in the manner mentioned, it was evident, that remedies equally different,

ent, and differing in the same way, that is, not in kind but degree, must remove them. This, too, he has proved in the same complete manner. And the conclusion must at first sight be granted, or there is an end of all sound reasoning.

All this amounts to a plain demonstration, that the causes, which give birth to this doctrine of exceptions to general facts, originate from incomplete analysis, artificial arrangements, and false inductions; in short, from all the causes which give birth to ~~error~~ ^{error} in science. But, frail as this basis upon which it rests may appear, it still must continue the foundation upon which the builders of system, and the croakers of hypothesis, have trod, and must still continue to tread, if they wish to cloak their imposture from the ignorant and credulous, and shun the mortifying stings accompanying detection.

CHAP. V.

The Application of the Principles of Philosophical Analysis and Induction to Medicine.

WE have attempted a division of our subject into two distinct parts; preparatory, and scientific. The preceding chapters have a reference to the former, the following to the lat-

ter. In the former, an effort is made to instil into the mind a suitable propensity for the reception of truth, and for the investigation of an intricate department of nature, by affording it proper directions, dispositions, and models, to appeal to in so arduous an undertaking, and by fortifying it against the prejudices natural to men*.

In the following departments we are engaged in a more serious inquiry, and in topics of singular moment; since by them the instruments, with which philosophers have hitherto been successful in the discovery of the laws of nature, are developed. The method of analysis and induction applies to every aspect of nature, to the sciences of physics as well as to ethics. In the former, from phenomena and mathematical evidence, we arrive at the laws of body. "In the latter, from moral perception, we ascend to moral law; and from moral law, by an extension of the principle of justice, we ultimately arrive at the laws of nature and of nations†."

In order to introduce with propriety the articles taken notice of in the text, it is necessary to observe, that the history of philosophy exhibits to us two remarkable æras. The one is distinguished by the *Organum* of Aristotle; the other

by

* See Bacon's Nov. Org. Scient.

† Professor Bruce's Lectures.

by the *Novum Organum* of Lord Bacon. The one has a reference to the invention of syllogism; the other to analysis and induction. It is not our province to give a comparative view of the relative merit of these engines in science. It is only necessary to observe, that in syllogism the mind descends from general principles to facts involved in them. On the contrary, in induction, it begins with particulars, and rises gradually from these to the laws of nature formed by them. The first took its origin among the Greeks, and pervaded the whole system of philosophy for 2000 years: The latter was the discovery of the great Bacon. Finally, the one is the offspring of art; the other, the child of nature. The vestiges of the former are perceptible in medicine, on the slightest examination of its different aspects; but of the latter the most faint traces occur only to our observation in the same profession. Which in its present state was to be expected, as induction signifies the progress of the mind from a knowledge of particulars to some general truth, a method scarce so much as dreamed of by physicians. In it, the mind never admits a law, respecting any department of nature, till it has examined every particular fact which gives rise to it, seen its place with respect to others, and marked its import. But all this is a progression diametrically opposite to that, till of

late followed by the different creators of medical systems.

Previous to entering upon our subject, it is necessary to point out the subserviency of analysis and induction to each other. The method of analysis, we observe, is the method of nature, as it should be a faithful picture of nature. Its province is to be conversant about particular objects or phænomena, in order to assemble them together to facilitate their arrangements in nature. The science of induction rises on analysis, or proceeds from the facts and arrangements in nature to the discovery and application of its laws.

“The phænomena, which afford an induction descriptive of a law of nature, ascertained by analysis, must be obvious, uniform, and universal*.” But, while the phænomena and facts of nature are the foundations upon which legitimate induction is reared, there is nothing more general in medicine than doubts relative to facts in nature as related by physicians. Indeed, this is so universal a theme of reproach, that, when a person attends a lecture, a society, or reads an author, a single page can scarcely be passed over in the latter, or a single minute elapse with respect to the former, but the mind is harrassed with doubts, and vex-

* Bruce's First Principles of Philosophy.

ed with uncertainties. So that it very evidently appears, that we labour under precisely the same difficulties in medicine with respect to the legitimacy of our facts, which natural philosophers did, when the *Novum Organum Scientiarum* of the great luminary of modern philosophy was preparing for the inspection and direction of subsequent discoverers. His expression on the occasion is highly beautiful, and admirably well adapted to our purpose.

“ And for the foundations of experience,
 “ which is the next thing we must proceed to,
 “ they have not hitherto been laid, or very weakly.
 “ Nor has a collection of materials, competent ei-
 “ ther in number, kind, or certainty, for inform-
 “ ing the understanding, or any-wise sufficient
 “ and worthy of the end proposed, been hitherto
 “ made. But, on the contrary, learned men, after
 “ an easy, indolent manner, have received cer-
 “ tain rumors of experience, and the popular re-
 “ ports and tales thereof, both for building and
 “ strengthening their philosophy, and giving
 “ them the weight of strong testimonials. Which
 “ is just as if a kingdom should govern itself,
 “ not according to the advices and intelligences
 “ of its ambassadors and trusty officers in foreign
 “ courts, but by the idle rumours and common
 “ town-talk of its people. For as to matter of
 “ experience, there is nothing hitherto well disco-

“ vered, verified, adjusted, weighed, or measu-
 “ red, in natural history: And whatever is vague
 “ and undefined in observation, must needs be
 “ fallacious and deceitful in the information. And
 “ if this shall seem surprising, or the complaint
 “ appear unjust to any one, whilst so great a
 “ philosopher as Aristotle, assisted with the purse
 “ of so great a prince as Alexander, has compi-
 “ led such an exact history of animals; and
 “ whilst some others, with greater diligence,
 “ though with less bustle, have contributed many
 “ things thereto; and whilst others, again, have
 “ wrote copious histories and accounts of plants,
 “ metals, and fossils; such a person does not seem
 “ sufficiently to understand our meaning. A na-
 “ tural history, compiled for its own sake, is one
 “ thing; and a natural history collected for in-
 “ forming the understanding, in order to the
 “ building of natural philosophy upon it, is an-
 “ other. And these two histories, as they differ
 “ in other respects, so do they principally in
 “ this, that the former contains various descrip-
 “ tions of natural bodies, but not experiments
 “ of mechanic arts. For as, in civil life, the
 “ temper of a man, and the secret dispositions of
 “ his mind and affections, are better understood
 “ when he is ruffled than otherwise; so the se-
 “ crets of nature are better got out by the tor-
 “ turing of arts, than when suffered to take their
 “ own

“own course. And therefore we may then have
 “good hopes of natural philosophy, when na-
 “tural history, which is the basis thereof, shall
 “be better supplied, and not before *.”

In like manner, we may have good hopes for the cultivation and improvement of that art, which hath a reference to the successful conduct of health and disease, when the powers productive of the phenomena of health and disease are accurately analyzed and understood. How fundamentally subversive of this idea, is the fabric of Empiricism, and the doctrine of Specifics? A numerous range of which are ushered in at one time, with a thorough conviction and a positive certainty as to their mighty efficacy; at another period, rejected with indignation.

The unexampled applause which cicuta met with in the cure of all the modifications of scirrhus and cancers, is a memorable instance within our own memory of the credulity of physicians. The notion of specific excellence pervaded the whole medical world for a considerable length of time, after the reception of this drug into practice: And the enthusiasm of its abettors have been abundantly evinced, in the melancholy records of most charitable institutions for a considerable space of time. This drug affords a singular instance of the repugnance to the pre-
 cepts

* Bacon's Nov. Organ.

cepts of philosophy, which the physicians, who glory in the title of Empirics, display upon every occasion.

Instead of attending to the circumstances concomitant to the exhibition of every drug, of aliment, drink, temperature, exercise, passions of the mind, &c. their sole attention appears to be engrossed in the exhibition of a few grains of this remedy; as if no benefit was to be supposed to accrue from any of the ordinary powers which actually support life, by affording a stimulus, the failure of which had induced the disease. If they had examined accurately the powers productive of scirrhus, and the period of life at which it happens, they would have discovered that they were all such as act by a debilitating operation. This consideration solely would have led them to pay no such uncommon deference to this unimportant and inessential material, or trust to so impotent a power, as a few grains of an insignificant remedy. However, this I will venture to affirm, and I believe every physician of candour and liberality will assent to it, that without a considerable attention to the several powers, that operate by an invigorating quality, cicuta hath never been efficacious.

The next in the catalogue of nostrums is zinc; the reputation of which, in the cure of epilepsy, hath been little inferior to the preceding in the treatment

treatment of scirrhus. At one period its medicinal powers were, to adopt the language of its rhapsodists, fully adequate to obtain a complete radical solution of this disease.

The history of this article exhibits to us a curious instance of neglect, and inattention to the circumstances accompanying its exhibition; as we have demonstrable proofs of its being solely and abstractedly attended to, till experience clearly evinces its inefficacy, and completely shews the want of an analysis of its qualities and the nature of this disease: for no inference respecting its qualities and mode of operation is discernible; all that is supposed, is only that it is possessed of some specific virtue.

At another period mercury is received as a specific in lues venerea; in which the same *petitio principii* obtains as in the preceding articles, till the want of noses, and complete destruction of gums, fauces, teeth, and tongues, afford a tacit intimation to physicians of the impropriety of confiding solely in it: consequently recourse is had to mezereon, sarsaparilla, the Lisbon diet-drink, and a variety of such articles, but all without effect. Hence will the miserable sufferer sink under his load of grief and anguish, a victim to the want of application of the principles of philosophical analysis to the subjects of the *Materia Medica*. It is agreed by all physicians, at least by all that have

have appealed to its effects, that mercury operates as a stimulus; that it promotes, if aided by other similar powers, a vigorous perspiration; and is inductive of other phenomena characteristic of the operation of a stimulus. It legitimately follows, therefore, that the good consequences arising from its use result from this source. Is it therefore not wonderful, from this inference respecting its qualities, that means of a similar nature are not had recourse to during its use, to cooperate with it, to enlarge the basis of our truly limited practice, and more completely to obtain the advantages which these qualities intimate to us.

The same mode of reasoning will apply to the method adopted by physicians in the use and abuse of electricity. Nothing is more familiar than the observing this valuable remedy used conjointly with some other evacuant and debilitating powers, viz. bleeding, purging, inanition, &c *.



This is a remedy known to every person to be possessed of remarkably quick stimulant powers: it hath therefore been used in the different modifications of paralysis, and is found to afford a temporary suspension of the complaint; which, however, shortly recurs as violent as ever. From this it naturally follows, that powers operating upon similar principles, but of a more durable

* I have seen this practice an hundred times in the Royal Infirmary of Edinburgh.

durable operation, would be fully adequate to obtain an effectual cure in most cases of idiopathic paralysis.

It is strictly admissible, and compatible with common sense and experience, to believe, that cases of paralysis where electricity has been applied, have been relieved ; hence its denomination of a *specific*. But to give credit to reports of its being solely efficacious, or where powers diametrically opposite have been conjoined, is as preposterous as the belief that the world is composed of atoms and pores.

Further, I have heard it gravely asserted by one physician, that the volatile alkali, an acknowledged pernicious remedy in every phlogistic disease, had been useful in peripneumony, who with the same breath affirmed it to be particularly efficacious in intermittent fevers *. By another physician the exhibition of *serpentar. Virginienfis*, had been recommended for a trial to a friend of mine who had occasion to attend a patient in peripneumony, though its stimulant qualities were universally acknowledged. In the last, the most complete traces of Empiricism obtain : and as to the former, we are irresistibly led to place no confidence in the assertion ; for every appeal to the nature of peripneumony, and the principles upon

— * Dr Home's Lectures on the Materia Medica.

upon which the medicine operates, lead directly to a negation of the fact so assumed.

The importance of this analysis is still further conspicuous, in order to remove the implicit credit which some physicians have paid to a few practitioners in Holland. Who have, from false principles in pathology, conceived that absorbent earths, especially the *oculi cancrorum*, were singularly efficacious in uterine affections, especially in leucorrhœa; and that the peculiar efficacy of this remedy resided in its astringency. Can any thing be more preposterous than the conceit, that 3j. or 3ß. of this drug should affect the living body in such a manner as to remove a disease of such considerable debility as leucorrhœa, where, independent of the weakness of the parts locally affected, every function is so considerably impaired, and the seat of the disease can be demonstrated, from every cause inductive of it, and every power capable of removing it, to occupy the whole system.

Besides the discharge of serum, which takes place from the relaxed uterine and vaginal vessels, and which constitutes a considerable share of this disease; it is frequently found to be conjoined with a discharge of blood from the same vessels. In this condition it is found to be, in the event, at least 39 times in 40 incurable, according to the present practice. It is truly astonishing

ing that the lives of our fellow-creatures should be so sported with, as to be thus subjected to the lies of imposture and the ignorance of credulity.

Semiruba is a medicine which hath met with its encomiums; and eventually will, I presume, meet with the fate it deserves. This remedy hath been recommended as a specific in dysentery, as much as gum kino, columbo root, &c. have in diarrhœa. But, I believe, no physician will be so mad as to refer us to actual instances of their success; for an appeal by the unprejudiced to their efficacy, would, I have no manner of doubt, belie any assertion to the contrary.

The reliance of physicians on æther, in cases of asthma, hath equally been subjected to disappointment in the event. This medicine is remarkably successful in preventing a paroxysm when forming, as well as affording a solution to it when formed. But, mark the consequence: The fit, similar to a part affected with palsy, and relieved for the time by electricity, recurs more violent than ever; and paroxysms are found more frequent in consequence of its use.

Is it not agreed by all physicians, that æther is one of the most diffusible of all stimuli, or, according to their language, a most powerful antispasmodic? That it prevents the fit's approach, and relieves it when present, from its affording

a state of temporary vigour, is unquestionable : What might then be expected from powers of a similar nature, but of a more durable operation ?

Angina Pectoris is a form of disease which hath made some bustle of late in the medical world. Whether or not it is the more conspicuous for its novelty, the uncommonness of its appearance, or its malignancy, is not my province to ascertain. But this is certain, that physicians have hitherto made no observations, either on the causes which produce it, or the remedies which remove it, that amount to useful facts, notwithstanding numerous instances have solicited their notice since it first of all obtruded itself on their attention. Neither is it to be wondered at, while their whole attention is engrossed in searching for specifics, such as the different preparations of antimony, &c. and for some snug corner of nosology for its reception. Whereas, had they applied the principles of analysis to the powers inductive of it, and the forerunners to its formation ; if to this they had superadded complete attention to the real phaenomena of the state of predisposition and of the disease ; its nature would long ere this have been discovered, and practitioners would have been relieved from the insupportable affliction attendant on seeing their fellow-creatures in extreme misery, without relieving their distresses.

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The credulity of that physician is still further pitiable, who, from confidence, in the peculiar efficacy of burnt leather, burnt sponge, and other trash of a similar nature, expects to cure scrophula, and a variety of tumors both encysted and solid, occupying different portions of the body. I know no character so truly despicable, or that merits the indignation of society more, than the wretch who despises the knowledge of rules of science in the practice of a liberal art, where the most invaluable of all human blessings, health, and its attendant comforts, are at stake. Nothing surely more completely evinces the revival of the philosophy of Democritus, than this propensity of physicians to Empiricism. Instead of observing coincidences and affinities in nature, they observe a very different conduct indeed: Like apt pupils in the Democritic school, they endeavour to demonstrate that nature is made up of parts completely heterogeneous with respect to each other; and that a pleasing affinity is nowhere discernible in her phænomena, or the characteristic of her works. Were we, however, to follow the steps which Newton did in his discovery of the laws of light, or of planetary gravitation, a very different opinion would instantly be begot in us. This illustrious philosopher, in the last case, saw that it was the property of all bodies to fall to a common centre. He saw

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this property not only in small bodies, but in great; in those at a distance, as well as those at hand. From which analysis of particulars he drew this inductive conclusion, That it is a general law of nature, that all bodies gravitate.

Should our curiosity lead us further to pursue the inquiries of this great man, we should find him discover some general property in which bodies existing on this earth agreed, and of which its machinery is formed, and this forming a part in one great whole. Should we still go further in our inquiries, we could find other planets like our earth, enlightened by the same sun, and this forming but a part in the solar system. Nay, our journey would not end here. We next could discover other suns enlightening other worlds like our's, and our sun but forming one point in the immense collection of suns and worlds. We find them all making a part in the universe, and forming all distinct parts of being *. Here cease our inquiries; the mind can expand no more. In this progress the method of analysis is sufficiently conspicuous: The inquirer, from an analysis of particulars, hath, in the ascending scale, or, to use the language of science, by the analysis of composition, discovered the most general of all truths or laws.

We shall, in a similar manner, trace the steps which led Dr Brown to that extensive induction,
from

* Addison's Spect.

from which he demonstrates, in the most indubitable manner, that all the powers which operate upon living animals, and that are productive of the phenomena of health, predisposition to disease, and actual disease in them as well as in the vegetable creation, stimulate. It is our province to examine it on the principles of philosophical analysis; nothing being more certain, than, that, when we forsake the method of induction, error unavoidably ensues. The errors in natural philosophy, previous to the application of inductive science to it by the modern Eclectics, as well as the abstractions, &c. among the sects of moralists and metaphysicians, are complete proofs of the observation. The unnatural distinctions in the systems of *Materia Medica*, are unquestionably the result of applying false philosophy to medicine. But the mischief rests not here. For the greatest of all plagues in science, inaccurate language, has been superadded to the evil.

In this dilemma, a mind possessed of singular accuracy and profound judgment, was indispensably requisite, in order to analyze all the several powers operating upon animated nature. This important task appears to have been allotted to Dr Brown. He set out with an hypothesis. However, he found it as indispensable to adopt the Newtonian rule in this department as in the

other parts of his system; and his progress is strictly conformable to it. He began his observations on powers which were known and familiar to him, and by degrees rose to those which were more remote from his observation. He necessarily found, that the blood, chyle, food, the fluids separated from the blood, air, heat, &c. stimulate animals. From these phænomena his attention was necessarily transferred to the proper functions of mind, viz. passion, emotion, thought, together with muscular action. These he also found to stimulate; their effects being the same, viz. life in its different degrees: for without the agency of these powers, life must cease.

Having surveyed all these more familiar objects, his attention was necessarily called to subjects more difficult of examination, and intricacies seemingly unsurmountable assailed him; so that his hypothesis must have perished: for the operation of contagions, poisons, opium, and numerous objects of a similar nature, were unquestionably of difficult solution. To his embarrassments in this situation, the doctrine of anodynes, the fate of the Marseilles porters, who died upon opening bales of goods impregnated with the contagion of the plague from the Levant, together with the disasters accompanying dogs who visited the Grotto del Cani, were apparently
sufficient

sufficient to convince his opponents, of the wild delusion of his opinions. In this situation, he had recourse for reinforcement to the principles of the second Newtonian axiom; and this afforded a complete solution to his manifold embarrassments.

He reasoned as follows. Heat to 63 degrees stimulates animals sufficiently for the due performance of all the functions of body and mind. When it is above this point, or below it, the phenomena of life are heightened or impaired; but when considerably above or below it, the functions of body and mind are impaired; or cease altogether. For example, a man deprived of muscular action and proper cloathing, could not live a few minutes at the freezing point: and yet would it be false to allege that this temperature is stimulating? since fish and several animals are found to live even under that temperature, and to perform all the proper functions of life in it. It is therefore a legitimate consequence, that this temperature is stimulating, as the effects, viz. life, &c. are equally enjoyed at 68 as at 0.

This mode of reasoning he hath adopted in the examination of every power operating upon the human body, whether blood, air, food, &c. For blood in abundance and in defect constitutes a stimulus; food, nourishing abundantly, or af-

fording a defective nourishment, produces the same effect. Air, when pure, affords, probably independent of its use in respiration, a considerable stimulus to the body, and its effects in all probability are in proportion to its purity.

Impure air, improper food, and deficient quantity of blood in the system, are found to give birth to fevers of the most malignant nature: If contagion be superadded, their effects are increased, but no essential difference in the nature of the disease is constituted. Hence he draws this inductive conclusion, That contagions, whether affecting persons predisposed to phlogistic or asthenic disease, operate like the ordinary powers; their effects being the same precisely with them, in increasing * or diminishing † excitement.

Poisons, giving birth to idiopathic disease, add additional weight to his conclusion. Numerous facts are not wanting to prove, that epilepsy, palsy, apoplexy, and asthmatic paroxysms, have been induced by poisons. Their giving birth to these forms of disease, are complete proofs of their operating in a manner analogous to the ordinary powers, viz. by giving a deficient stimulus, or by diminishing the excitement; which, by a copious induction of facts, he proves to

* As in small-pox, measles, and all the phlogistic exanthemata.

† In plague, simple typhus, cynanche gangrenosa, &c.

to be the cause of these diseases, and not plethora. They require, therefore, a very different mode of cure from that which the doctrine of plethora suggests.

Opium, he also undeniably proves, contrary to the received opinion, to be a most quickly diffusible stimulus, and not a sedative. Its essential use in diseases of the greatest debility, in abating the frequency of the pulse in the last stages of fevers, dropries, &c. which unquestionably is a symptom of debility; its allaying delirium in fevers, and affording sleep, which are symptoms also of debility*; its universally proving detrimental in all phlogistic diseases, in all recent and gun-shot wounds, by preventing instead of procuring sleep, by aggravating instead of allaying urgent symptoms, prove the truth of the observation.

In this manner he proceeded in surveying every power operating upon animals in their living state; and ultimately arrived, aided by the rules of analysis and induction, at the most universal conception which the mind can attain, viz. this extensive law in nature, "*That all the powers operating upon the animal and vegetable kingdoms, and creative of all their phenomena, stimulate.*"

Thus have we attempted the application of
E 4 the

the principles of philosophical analysis and induction to the profession of medicine. The subject is highly worthy the most accurate examination; having no less an object than the complete extirpation of Empiricism.

The strange propensity of physicians to Empiricism, which at present so flagrantly directs every department of the profession, hath given rise to a very copious catalogue of books of cases *; from which no useful or just deduction can be drawn, no truth discovered, but this very melancholy one, That the lives of our fellow-creatures are subjected, especially in hospitals and dispensaries, to the dogmatic canons of credulous graduates.

The assemblage of false information lately recited, is an additional argument for its completion. For without these important instruments of science, no resemblances in the powers operating upon the human body will be perceived; but the idea of exceptions to the laws of nature will be inculcated without end. On the other hand, if complete attention to the circumstances accompanying the exhibition of medicines were attended to, an analysis of the more general qualities of these medicines would be obtained; and an induction would follow, explicative of the laws of nature, and characteristic of different diseases.

C H A P.

* See Home's Cases in the Infirmary, and Duncan's in *his Dispensary*.

C H A P. VI.

*The Application of the Principles of Philosophical
Evidence to MEDICINE.*

PHILOSOPHICAL evidence signifies the means employed to ascertain the reality of the objects and relations in nature. Its branches are, consciousness, intuition, sensation, cause and effect: That which belongs to medicine, is the particular species of evidence, effect and cause. Observation and experiment guide the human mind in applying the degrees of evidence *.

From the preceding definition of evidence we are warranted in asserting, that no recourse to demonstration is required, in order to prove, that the cultivators of our art have paid too little attention to the subject of this chapter. It is a subject that appears in a light truly important, as it consists in an analysis of the different means which establish truth. Hence we find that different sciences require different kinds of evidence, and afford corresponding degrees of certainty. The truth of our observation is sufficiently exemplified in the superiority which the modes of demonstration in physics and mathematics discover, to that observed in metaphysics and ethics.

To ascertain the degrees of evidence and cer-
tainty

* Bruce's Lectures.

tainty which apply to medicine, is a subject highly meriting a pen capable of genuine philosophy and precision. The thoughts I have to communicate will be expressed as briefly as possible.

3^d — In practical writers we find the causes of diseases deduced from the evidence which symptoms, independently and abstractedly considered, suggest. Hence we find a particular attention to these circumstances strongly inculcated by nosological writers, as coincidences and affinities in the line of symptoms constitute the basis upon which this frail department of our profession rests. It requires no preternatural share of acuteness to demonstrate, that this modern appendix to medicine is fundamentally erroneous: that it misleads from the real observation of nature; and rears its fabric of affected acuteness and ostentation, on the basis of false philosophy, by the admission of false evidence.

I shall endeavour to prove, that the abstract consideration of symptoms leads directly to error in almost all diseases. We shall, in the first place, instance the truth of this remark in proper fever; the proximate cause of which is inferred from the dryness, paleness, and constriction on the surface: Hence the denomination of *spasm* *. But we have complete perception of the removal of this constriction or spasm, by the appearance of

* See Cullen's First Lines.

of colliquative sweats which eventually ensue, and colliquative diarrhoea, and other symptoms of the same import; while the paleness and other symptoms indicating the existence of this supposed cause remain; and the disease, instead of being relieved, continues with an accelerated progression in its fatal career.

Further: The cause of inflammation is referred to the same principle, viz. a spasm of the extreme vessels. Let any person of common sense but examine what kind of evidence lays the foundation of this induction, or whether it has any evidence but that suggested by suppressed perspiration, which is a symptom universal in phlogistic diseases: It will appear completely fallacious like the preceding. But notoriously so with respect to the latter, as a flagrant piece of sophistry is committed. For the general operation of all the powers creative of phlogistic diathesis acts upon principles that would remove a spasm; and the powers employed to remove the inflammation or phlogistic diathesis operate upon principles that must altogether fix a spasm; which unquestionably is a symptom of debility, whether as occupying an internal cavity, or an organ of voluntary motion. It is truly astonishing, that even the result of more than forty years experience should be an attempt to reconcile such glaring absurdities.

Indeed,

Indeed, it would be an endless subject to pursue this false philosophy through all its windings and mazes. Suffice it to observe, that all his proximate causes, at least those that have the most distant claim to novelty, are the result of false evidence. The evidence suggested by the *juvantia* and *lædientia*, the only species of evidence upon which we can hope to make discoveries, is altogether omitted; and attention to apparent phænomena, not the real phænomena of nature, are almost solely inculcated.

An astronomer may as well expect to draw a just conclusion of the real motions of Jupiter or any other primary planet, from their apparent contorted and looped evolutions; or a philosopher discover a law of nature, in physics, or morals, by an appeal to the Categories of Aristotle; or a critic hope for fame in all the fine arts, when he breathes nothing but the rules of Aristotle, Quintilian, and Longinus; as a physician can hope to discover the nature and causes of diseases, when he rears his inductions on false evidence.

If this aspect of sophistry in medicine were altogether confined to the formation of hypotheses; if its precepts did not extend to the practice of the profession; if its influence did not pervade both private and hospital practice, which I hope to establish by proper instances; nay,

may, if its baneful consequences were not universally conspicuous, it might admit but of a slight animadversion. But the innumerable instances of its fatality which I have seen, and which daily occur, should certainly have given birth to a different aspect of evidence. Without just evidence, confusion must attend our judgment in the following modifications of idiopathic disease, phrenitis, ophthalmia, hæmorrhagy, rheumatism, and the fugitive pains which so frequently accompany the asthenic diathesis, and which so constantly invite the cupping-glasses, and numerous other local torments. Nothing is more clear to me, than that, without the most complete attention to the form of evidence previously recited, our efforts to succour our fellow-creatures will prove abortive in nineteen cases out of twenty: at least the following forms of diseases will altogether be confounded without it, viz. the active and passive * phrenitis, the active and passive ophthalmia, the active and passive hæmorrhagies, the active and passive rheumatism, the acute and chronic catarrh, together with active and passive inflammations occupying different parts of the system.

We are altogether indebted to Dr Brown for applying this department of science to medicine, viz. the philosophy of evidence. The false

* Exemplified in typhus.

false species of philosophy which has hitherto been applied to our profession has been in no department considered by this author with greater attention than the part we are at present engaged in. This philosopher and physician appears to have seen in its just light the application of sophistry to medicine; but in no department, says he, is it more reprehensible than in this instance, as it is pregnant with destruction, and calls loudly for amendment.

The evidence which he admits of, is the evidence inculcated by Bacon, and adopted and applied by Newton; its denomination has been given. The invaluable precepts it is fraught with, and the successful cure of disease it affords, are too numerous to need a recital. The consequences to which the neglect of it leads, cases of actual practice will best inform*.

CHAP.

* See Appendix.

C H A P. VII.

*An Examination of NOSOLOGY on the Principles
of Philosophical Arrangement.*

PHILOSOPHICAL arrangement signifies the classing of phænomena by their real qualities and relations. The qualities which direct to philosophical arrangement differ in every department of nature. They should be obvious, uniform, and universal *.

Notwithstanding the deception which unavoidably is found to attend the abstract consideration of symptoms, independent of the powers which create and remove disease : Notwithstanding the evidence they give birth to is demonstrated to be completely fallacious ; for it is known to every person, that diseases the most dissimilar to each other in nature, are attended with a similarity in point of symptoms, as is sufficiently exemplified in the preceding chapter : Yet this is the species of evidence upon which a late fashionable study, Nosology, rests. This, like the Categories of Aristotle, is made the standard to which every aspect of misery and anguish is made to conform. Its abettors admit of its infant-state. But reason, experience, and philosophy, point out the necessity

* Professor Bruce's Lectures.

fity of anticipating its maturity by crushing the hydra in its cradle*.

We would not wish to be considered as withdrawing our assent to the importance of this study, from the puerile and contemptible considerations actuating a party; or from the mere verbal affirmation of any person, however great and justly weighty his authority, or respectable his character; if an appeal to the facts in nature did not fully support us, and if a complete conviction, that it derogated from the first principles of philosophy, did not lead us to affirm, that the real arrangement of nature will never be discovered by the observation of coincidences in the form of symptoms. Thus, wherever the symptoms of languor, lassitude, the loathing of food, nausea, vomiting, and frequency of the pulse, concur, a foundation is laid for the belief that they imply the same morbid state. No recourse or appeal is made to the form of evidence previously recited. Accordingly we find, that diseases from this notion are classed together; viz. the intermittent fever and typhus in the same order with synocha; cynanche maligna, with the highest of all phlogistic affections, peripneumony; small-pox and measles, diseases of very high excitement, with the lowest in the scale of debility, the plague†.

In

* El. Med, lxxvii. † See Cullen's Nosology.

In all these diseases, though a striking affinity is discernible by nosologists, the most complete discrepancy obtains as to the causes producing them, and the powers removing them. But the delusion rests not here. We can perceive an equal degree of artificial classification in the junction of local with idiopathic diseases, which universally pervades the whole systems of nosology. This, however, leads to worse consequences, and to inextricable confusion both in the prognosis and cure; for by these means we shall not be enabled to determine which diseases are susceptible of mitigation only, which of radical cure. Every physician of candour will confess the universal want of success which attends the treatment of phthisis pulmonalis, for it is altogether a local or symptomatic disease. The incurable nature of intussusceptio is known to every practitioner: this likewise is a local disease; and, like many others, is always the result of neglect or ill treatment of an idiopathic affection*.

We may administer squills eternally, or any other medicine, for dropsy, whether occupying the head, chest, abdomen, or cellular membrane, if a local affection gives rise to it, viz. scirrhus liver to ascites, &c. In vain may we expect the solution of dyspeptic symptoms, and constant vomiting upon the taking of food, if a

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scirrhus

* Brown's Lectures.

scirrhus of the pylorus obtains, upon the principle of debility of the muscular fibres of the stomach being the proximate cause. Does not scirrhus, affecting the mammæ, or uterus, or testicle, alternately, after one of these in a diseased state has been removed, suggest to us the probability, if not certainty, of the disease being not local but general, and requiring not topical means, which surgeons vainly rely on, but general? The frequency of its transference to other parts, after complete excision of the diseased parts has taken place, is almost a demonstrable proof of the futility of our considering it in the light of a purely local affection. The common *ulcus mali moris*, which is relieved by P. bark and remedies of a similar nature, as constantly is found to defeat the common topical means singly.

The evidence afforded by symptoms, we have found, leads directly to the association of phlogistic idiopathic disease with asthenic; nay, the highest form of the former with the lowest of the latter. We have seen, that it rests not here; that it leads directly to the junction of local with idiopathic disease.

It is needless to spend any more of our time in reprobating a doctrine of our profession altogether founded upon false principles, warranted by nothing, unless it be considered as an *Index* or *Dictionary* of reference. However, it is much

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to be lamented, that the distinction of local from idiopathic disease, which nosology altogether confounds, is not more complete, and the powers operating upon the living body more accurately analyzed and attended to by physicians. By this means they would be enabled to discover the real relations of these powers as obtaining in nature, and the precise nature of idiopathic disease and its modified aspects. It would lead us to avoid all vague and obscure reasonings, which are the result of incomplete analysis, and to treat our art upon principles truly scientific. The period of hope, and that of despair, would from hence be taught. But, on the contrary, being remiss in this distinction, and in the analysis we have so repeatedly mentioned, leads us to treat a person upon the same principles who falls into palsy, apoplexy, or epilepsy, from a local cause, either by a steatomatous or bony excrescence pressing upon the brain; as if a person became epileptic from a debilitating cause, or cataphorous from an effusion or plenitude of blood in the vessels of the brain.

C H A P. VIII.

An Attempt to shew the Application of the NEWTONIAN AXIOMS to MEDICINE.

THE great importance of Sir Isaac Newton's axioms, in all the sciences where material nature is the subject of contemplation, is too universally received to need any particular notation in this place. Their application, however, appears not to be confined to this aspect of nature; for they have been extended to the sciences which have a reference to intelligence, and particularly to that aspect of it which regards man's intelligent and moral faculties. This extensive range of nature which they take, occasioned the denomination of "universal axioms of nature*."

The immortal Bacon appears to have laid the foundation, in his *Novum Organum*, of these useful directors of industry and genius.

We shall examine them in the order which they assume in the *Principia*, and in the most brief manner.

FIRST AXIOM.

The causes only that are true, and sufficient to explain phænomena, are to be admitted into any science †.

THE number of causes which have been considered by physicians as necessary to explain the

* Bruce's First Principles of Philos. † Newt. Princip.

the phænomena, of disease, has been almost infinite. The denominations of *predisponent*, *exciting*, and *proximate causes*, are familiar to every smatterer in medicine; nay, internal and external causes have been superadded to this group of unnatural distinctions*.

Nothing is more clear, than that physicians have been too implicit copyists of the Aristotelian philosophy in this department. The most complete resemblance obtains between this diversity of causes and the Categories of Aristotle, under which he ranged all knowledge.

That nature does nothing in vain, nor employs a multiplicity of causes to produce an effect when a few will, is the language of true philosophy. How discrepant to it is the recital previously given?

Previous to the application of Lord Bacon's philosophy to physics, the most complete analogy obtained between the language of philosophers and that which at present is held by physicians. A multiplicity of causes were considered as necessary to explain any of the phænomena of nature. The experiments, however, instituted by Sir Isaac Newton to prove gravitation, have all one tendency; they all contribute to establish the object. Previous to this period, we heard of nothing but the abstractions of Des Cartes. We heard of Nature's abhorring a vacuum;

* El. Med. Brun. lxi.

of planets being held in their orbits by the power of vortices, &c. Thus a multitude of causes was introduced into science, more than were sufficient to explain the phænomena of nature. When we survey the particulars leading to any law, we find it unnecessary to bring more causes than what we can account for: it is needless to introduce more, if the facts on which the law is founded are accurately analyzed.

Till lately, however, no attempts have been made by physicians to apply Newton's axioms to the profession. This assertion is verified by an appeal to the constant language of physicians.

For, as we have had occasion before to observe, predisponent causes, exciting causes, proximate causes, nay, internal and external causes, to use the words of a celebrated English political writer, "dancethro' their works in all the mazes of metaphorical confusion *." Like the instruments used by physicians to remove disease, and which we have attempted to subject to the test of analysis, no resemblances have they discovered in the powers creative of them; though the most complete coincidence takes place in all these unnatural distinctions; though a general operation is discernible in each separately, and in all combined together. The application of this invaluable precept to medicine was discovered by Dr Brown, which his Commentary on the doctrine of Predisposition,

* Junius.

disposition, inculcated in his Text-book*, will evince to any person the least conversant in philosophical inquiry.

The cause he assigns is one over all; viz. a variation in the degree of excitement. A certain given degree constitutes health: Every increase or diminution of that degree forms tendency to disease: And when the increase or diminution arises to a certain height, its consequence is actual disease †.

This proposition he has demonstrated, by proving, that all the powers acting upon the human body operate by producing excitement in the variety mentioned; and, in the diseased state, or tendency to this, that the remedies operate by diminishing excitement when excessive, and increasing it when deficient ‡.

This was bringing the matter to a degree of simplicity that the state of physic, distracted and confused by the multiplicity and discrepancy of the causes assigned, could not give the most distant hopes of.

This proposition applies not only to animal but vegetable life. It has therefore laid the foundation of a science which may be denominated the *science of living matter*, comprehending every modification of life on this terraqueous globe. Never was the axiom of Newton applied with

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more

* Elem. Med. Brun. † Ibid, xxviii. ‡ Ibid. xxix.

more completeness, correctness, and extent. The exciting powers operating upon vegetables are some of those which operate upon animals. They are, Air acting as a stimulus from its purity; a certain degree of heat producing the same effect; and moisture. When these are applied to a vegetable in a certain degree and proportion, they occasion its healthy state, by producing that degree of excitement which health requires. In higher or lower degrees, they give proportional increase or diminution of excitement; and therefore tendency to disease or death. Nothing more is necessary to vegetation but a proper application of those powers. The application is made by filtration to the root of the vegetable. This effect is accomplished by the earth, sometimes alone, oftener assisted by certain manures. When the earth is in a certain state of porosity, the powers we have mentioned, especially heat and moisture, are conveyed to every part of the root, in such a manner as to give the suitable degree of excitement. But when the earth, as a *filtrum*, is either too patulous in its pores, or not sufficiently so, the powers are applied in proportional excess or defect. And hence will arise the morbid or destructive consequences we have mentioned; and it is the use of different manures to correct this fault in the communicating *filtrum* *. All the

* Brown's Lectures.

the facts in agriculture, as practically understood by the most experienced farmers, have, upon careful examination, been found applicable to this proposition, and to afford demonstration of its truth.

The errors hitherto in farming, as in medicine, have originated from two sources, empiricism and false philosophy. They have centered in an idea, that vegetable life depended upon the quality of the *filtrum*, whether as earth or manure : hence there has been no end of their expressions about the salts of the earth, the salts of the manure ; the oils of the earth, the oils of the manure, &c. But these have no more share in the cause of vegetation, than the quality of the simple solids or the fluids has in that of animal life. They are equally, therefore, to be rejected, from the consideration of the cause of the one modification of life, as acrimony, viscosity, and tenuity of the fluids, and corruption of the solids, are inadmissible in the cause of the other modification of life *.

We now see, to the great range over nature which this new science embraces, that the axiom of Newton is completely and adequately applied. We have now attained one cause of life : and when we compare the simplicity of it with that assigned as the cause of motion in the solar system, and

* Brown's Lectures.

and with the imperfect idea which chemistry offers of the intestinal motion in small particles of matter, we are strongly tempted to conclude, that, instead of variety and complexity, the utmost simplicity obtains in every department of nature.

SECOND AXIOM.

That similar effects are to be ascribed to similar causes.*

THERE cannot be a more useful lesson held forth to the student of nature, than that which at present demands our attention. That this axiom has been altogether neglected in medicine, till brought to light by our author, is true: nay, its application to natural philosophy was overlooked for 2000 years, and required all the strength of mind of a Bacon, with the singular sagacity of a Newton, to apply it to this department of nature. A minute recital of the circumstances which gave rise to it, is foreign to our purpose. It is necessary, however, to observe, that when the laws of gravitation and motion were established, it was by trying a number of experiments on familiar bodies. Thus, Sir Isaac Newton found, by a copious induction of experiments on familiar objects, that all bodies fall to a common centre :

* Newtoni Principia.

centre: this suggested to him the necessity of examining distant objects by the same rule. He necessarily began to think that this power prevailed at the greatest distances we can reach from the earth: Why may it not reach as high as the moon? If the moon, says he, be retained in her orbit by this power, why may not the primary planets be also carried round the sun by the same power, and retained in their orbits by the same law? If this is the case, the secondary planets must be regulated by the same principle in revolving round their primaries. These are the steps which the illustrious Newton pursued. We shall as briefly as possible endeavour to ascertain their application to the profession of medicine; and we cannot elucidate the matter more clearly than by taking a retrospect of the steps which our author embraced, in forming one of the greatest discoveries which the history of philosophy furnishes. It is on this axiom of Sir Isaac Newton, that the chief excellence and beauty of his doctrines rest. In no department of the science of nature, I will venture to affirm, is the analytic plan more clearly evinced than this. It was not, however, till near 20 years being engaged in the study and teaching of every department of medicine, that he ventured to pronounce the medical tenets to be involved in hypothesis, replete with sophistry, incompatible with truth and

and philosophy, and highly baneful and pernicious in the practical precepts immediately resulting from them. It was not till the elapse of the period previously noticed, that he ventured to apply the Newtonian axioms to medicine, and ascend to the discovery of nature's laws in the animal œconomy. He followed precisely the same steps which Newton did in the discovery of universal gravitation: for he instituted accurate observations and experiments on diseases, both phlogistic and asthenic, to which he had been subjected. He discovered that the causes of the one aspect of disease were the remedies of the other, and *vice versa*. He began to conjecture, that this fact was not of a limited and solitary nature; though the different external forms of disease were, like the difficulties which occurred to Newton in estimating the force of gravity at different distances, at first seemingly unsurmountable. He, however, soon found, that the external appearance of disease, independent of the evidence of cause and effect, gave as fallacious a ground for judgment to the observer of nature, as the apparently retrograde, progressive, and stationary appearances of some of the primary planets to the astronomer.

He at length perceived the perfect inessentiality of these appearances to the formation of his large induction. He now saw, with additional rays of light,

light, the foundations on which physicians have erred in both reasoning and practice. In short, a rigid observance of the second Newtonian axiom, led him to that just, though laconical expression, *Nosologia delenda*.

These regular advances afforded him only resting places. For, led by the faithful hand of analysis, he surveyed every disease, both phlogistic and asthenic, and every particular involved in them. The progression was performed in the most deliberate manner, till he ultimately arrived at the most extensive induction that perhaps ever obtained in science, viz. That there are only two forms of idiopathic disease.

The nature of his subject led this author a step further in the simplification of cause and effect, than had been made in any other department of knowledge. He found, in medicine, that the whole phænomena of life might be reduced to one simple cause, the stimulant operation of certain external powers applied to a certain property of living bodies, which he denominated their *excitability*. He found, that this cause was always the same in kind, in every state of the living system *, viz. that it was always stimulus operating upon the excitability. And, when he came to inquire how the phænomena of health and disease were explicable as effects flowing from

* See the 1st, 2d and 3d pages of his Elem. Med.

this cause, he found that it was only a variation of it in degree that produced the difference in the effect; that the cause was still excitement, or the result of the operation of the exciting powers upon the excitability; and that the effect was the production of the several phænomena of life, sense, motion, intellectual operation, and passion. He perceived, that these, as the effect, always corresponded in degree to a proportional degree of the cause: that health arose from a given degree; and predisposition to disease, or actual disease, from an increase or diminution of the cause, in degrees always exactly proportional. The proofs he has brought of this proposition through the detail of the work, have established its truth in the most complete and satisfactory manner: And the utility of its application is established beyond a possibility of doubt, by the most unexpected and surprising success in the several cures suggested by the doctrine. He has, therefore, most indisputably carried the axiom of Newton to the highest degree of simplicity possible in nature; and thereby made an improvement that was hardly expected in any department of knowledge, and least of all in medicine.

It may be deemed unnecessary to consider the application of the third axiom to our subject, as the precepts contained in it are apparently in-

volved

volved under the two first. But though an imperfect survey of it would unquestionably lead us to consider it only as a consequence of the former; yet a more full discussion, and more complete application of it, will shew it to be of the utmost consequence in the philosophy of medicine.

THIRD AXIOM.

That those qualities which belong to all individuals in our power to make observations and experiments upon, ought to be accounted the universal properties of all subjects of the like kind.*

NUMEROUS instances of the beneficial influence of this axiom, when applied to natural philosophy, might be adduced; but such examples are superfluous, and foreign to our subject. The duty incumbent upon us to perform, is simply the application it admits of when extended to the improvement of the healing art. From this view of it we might shew, that several of the diseases, the causes of which have hitherto been involved in darkness, verbal disputation, and ineffectual attempts to the elucidation of ultimate facts, may be relieved from the gloom of apparent obscurity, extricated from the labyrinth of verbal superfluity, and placed in that train of investigation in which truth only can be detected.

But,

* Newtoni Principia.

But, the wanderings of physicians from this valuable rule, have been as complete as from the two first. Indeed, their reasonings would argue a total unacquaintance with its import; and their universal practice amounts to a direct proof of such ignorance.

The great Sydenham appears to be the only medical author who had any perception of the use of this axiom; and the reformation which took place in medicine by his efforts, would appear to be the result of his knowledge of its importance. The antiphlogistic pathology, which he had the merit of introducing, and the pernicious tendency of the phlogistic pathology, and alexipharmac practice founded on it, which he had occasion to observe in several diseases, led him by degrees to take an improper view of the import of this rule, and ultimately to lose sight of it altogether: For we find in him some hints relative to the arrangement of diseases according to symptoms, which the principles laid down in this and the preceding rules exclude altogether. Sydenham found, that the practice suitable to remove rheumatism and peripneumony removed other phlogistic diseases. Thus far he appears to be impressed with the principles held forth in this axiom. But when the same debilitating practice was applied to diseases of actual debility, his desertion of this useful rule is glaring. He

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manifestly made his experiments, not upon diseases of the like kind, but upon diseases the most distant in their nature from each other that can be conceived. Thus, fevers, asthma, epilepsy, palsy, apoplexy, hysteria, gout, and several diseases of a similar nature, have been treated upon the antiphlogistic practice instituted by this author.

However the followers of Dr Staahl, Boerhaave, and Hoffman, have differed in words, their practice has uniformly been the result of the phlogistic pathology of Sydenham, and of complete inattention to the precepts dictated by the third Newtonian axiom.

It will not therefore appear wonderful to the unprejudiced reader, that an effort to apply such a rule to the profession should meet with the most virulent opposition; although it has no less an object in view than the successful treatment of health and idiopathic disease.

We shall first of all observe, that the application of this axiom to medicine lays the foundation of the practical rules arising from the Brunonian principles. This is the rule which led our author to the institution of philosophical evidence for the purposes of the profession, and to the complete analysis of all the powers operating upon the living body. By a steady observance of the principles laid down in this axiom, he discovered an affinity between plague and idiopathic
G dropsy,

dropſy, as well as between catarrh and the diſtinct ſmall-pox; between the confluent ſmall-pox and gout, as well as between peripneumony and mania. And riſing gradually from ſuch partial to more general aſſemblages, he came at laſt to diſcern, that wherever either exceſſive vigour or debility prevailed in any concurrence of ſymptoms, they conſtituted a caſe of diſeaſe precisely the ſame as all other caſes where ſuch increaſe or diminution of the healthy vigour occurred. Nay, led by the ſame faithful thread of diſpaſſionate attention to nature, through the labyrinth of medical ignorance, empty diſtinction, and falſe aſſertion of facts, he, in fine, attained his univerſal propoſition, “That there are only two idiopathic diſeaſes; and that even theſe are not produced by powers different in kind, but, as we have formerly obſerved, different only in degree.” And from thence he drew his broad concluſion, That all the ſtates of whatever can be called life in the univerſe, were owing to this difference of degree. To this, reſpecting diſeaſe, nothing can be added, but that ſometimes a derangement of the ſolids, as ſimple and inanimate, or a fault of organization, may occur. This may ſometimes affect the general ſyſtem: but whether it does or not, it muſt be conſidered as different from idiopathic affection in its cauſes and mode of cure; theſe being local, while thoſe of diſeaſe are general.

But, how complete have the aberrations of
 phyſicians

physicians been from this rule? how unobservant of its wide and vast illumination? They all find the absolute necessity of paying the most nice attention to temperature in the small-pox; inattention to which is found to aggravate all the symptoms, increase the phlogistic diathesis, and eventually to endanger a confluent state of the disease. They have likewise found, that a person labouring under a phrenitic synocha, and exposed naked to that degree of temperature which constitutes what is termed the *freezing point*, was thereby completely relieved of his disease. These, and such like, are facts of an unquestionable nature. And it is our business, therefore, conformable to the dictates of philosophy, not to view them as of a solitary nature, but as of extensive import. It is incumbent upon us to institute experiments and observations on all subjects of a similar nature. It is our duty in this dilemma to reason like Newton; and the following would be the result: "That from similar causes, however different in their external appearances, the effects must be similar." By this rule it is found, that the phlogistic catarrh and measles are diseases similar in their nature to small-pox and phrenitis; in both of which, facts are adduced to prove, that cold, applied to the surface in a proper degree, has been an effectual cure.

1 The measles is a manifestly phlogistic case of disease; that is to say, upon the same footing as peripneumony, rheumatism, inflammatory fore-throat, and so forth. For all these, since the days of Sydenham, bleeding, purging, other evacuations, cold, and abstinence, have been found the most effectual, nay, nearly the only remedies; for our author has added others. Yet though the measles is nominated among those diseases, and in other respects treated like them, cold, however, has been studiously avoided in its cure; nor have the other antiphlogistic remedies, unless towards the end of the disease, been much urged. In short, we can discern a considerable trace of the exploded alexipharmac practice still prevailing with respect to the measles. The very language of the striking in of the eruption from cold, and keeping it up by heat, is still formally employed. The cause of this exception was the consideration of the catarrhal symptoms.

2 Catarrh was supposed to be occasioned by cold; and therefore, if any indication arose from that supposition, it was to cure the disease by heat.

3 The detection of the falsehood of this hypothesis was the last part of the Doctor's discovery. To which he was led by the following case.

He laboured under a severe hoarseness, with
other

other symptoms of catarrh. In the number of these was a sensation of cold, and exquisite desire for a hot situation. He knew not what to think of this, for want of facts of his own, or information from others. In this uncertainty, he continued to gratify his feeling; and, in a very hot season of the year, used a chamber that few persons in health could have borne in the cold of winter. He ate full meals of animal-food, and took such a portion of drink after supper as proved stimulant, without incurring the risk of inducing what he calls indirect debility from its excess. He also walked under the fervent heat that prevailed at the time. But, while he continued this plan of management, one day, as he was walking, he perceived his hoarseness manifestly increase; of which he was sensible, even before he made trial of the truth by making an effort to speak. This effort convinced him, that the stimulus of heat, and his exercise, had increased the complaint. He instantly perceived the amount of the fact, and intuitively took in the whole extent of its application. His fixed conclusion, without any further hesitation, was, that stimulants of every kind had produced this obstinate complaint; and that evacuants, and every other mode of debilitating his system, would prove the cure. He therefore forsook fire, betook himself to the upper storey of the

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house,

house, contrived a stream of air to play upon him assiduouſly, confined his diet to vegetable aliment, and chiefly in a fluid form, abſtained from ſtronger drink, and ſubſtituted for it plentiful potions of water. The reſult of the cure was, that a hoarſeneſs which had remained for ſix weeks, and proved exceedingly diſtreſſing to him, and the more ſo, that he had occaſion to ſpeak an hour every day publicly in his claſs, diſappeared in three days. He has tried the ſame cure ſince upon himſelf and others with the ſame effect; in the number of whom I have had in my own perſon repeated proofs of the validity of this important diſcovery. Its importance goes beyond its application to catarrh. It has, like a mathematical propoſition employed in the chain of proof in others, been transferred to the pathology of the meaſles. In conſequence of which, the father of my excellent and worthy friend Dr John Wainman has, in an hundred inſtances, found, that whatever effect cold and other antiphlogiſtic means have in the ſmall-pox, they produce precisely the ſame in the meaſles *. With this author, facts ſo ſure, always leading to others, crowd in upon him; for he has hence alſo overthrown the doctrine of cold being ſtimulant, &c. The diſcovery of the nature of catarrh, and its application to unfold the nature of the meaſles, and

* See his *El. Med.* ccxxi. cxxxiv. to cxxxvii. cccxlv.

and to give a complete confirmation to his previous discovery of the operation of cold, as being always debilitating, and in exact proportion to the degree in which it is applied, where heat and other stimulants, succeeding to it, or alternating with it, do not interfere to produce an opposite effect, was among his last. Among his very first was a still more important one. For tho' every member, composing a part of a whole, has its use as such, there are some more essentially necessary than others. Every proposition in Euclid is of some use, if not in itself, at least by entering into others, and making a step in their reasoning, in forming a link of a continued chain of truth. In a similar manner to these are we to estimate the facts that compose any system of true doctrine. For though many of the propositions of Euclid have the use which we have just now remarked, the 47th proposition of the first book is of still higher importance than any other; because without it the chain of reasoning would not only have been interrupted, but not one further link would have been added: and therefore the subsequent parts of this elementary system of truth would never have been discovered; and all the facts flowing from them, so necessary in their application to mechanical philosophy, would never have

arisen to the improvement of this or any other department of knowledge.

The discovery we are going to speak of is that of the nature of the gout.

Many treatises, especially during this century, have been wrote upon the gout. It is a disease chiefly affecting the rich and luxurious, who are the least disposed to bear pain, the most anxious to be freed from it, and therefore always ready to reward every pretension to superior knowledge in the nature of the disease. But while the encouragement for any improvement in the cure was so certain, and the prospect of credit and emolument, the great spurs to all human industry, so much within sight, that, if the state of the profession had been in any condition to make improvement, the gout long since must have been very well understood, to the great benefit of human society, and generally of the the most valuable part of it; no advance, however, has been made in the knowledge or cure of the disease. Like many other diseases, as physicians themselves confess, and like many more, whether they confess it or not, the gout has remained an *opprobrium medicorum*. But the matter has not rested here; for in this disease, as well as in all the rest, of the nature of which physicians were ignorant, so erroneous have the theories been, and so baneful the methods

methods of cure deduced from these, that, in place of doing some little service, which was the most that, with all their interested arts, any of them could pretend to, they have in every case done much mischief, and increased the cause of the disease, by the practice which they employed for the cure of it. Among the numerous wri-

ters on the gout, whether monographical, systematical, or, last of all, nosological; though they have had copious verbal differences, and apparent theoretical ones; their treatment in the cure has been uniformly the same: which, according to some, is to bleed; according to more, to use every evacuation except bleeding; but, according to the greatest number, to trust the prevention of fits wholly to low diet, and every other part of the antiphlogistic regimen. As the greatest number of diseases to which mankind are liable, are those depending upon debility; and as the only method of cure hitherto employed by physicians, is debilitating in the highest degree; the inference from these two facts is, that the ordinary practice of physicians is, to produce diseases where debility did not exist; to increase them as often as they depend upon it; to embitter the lives of mankind; and, sooner or later, according to the degree of the pernicious practice, to send them abruptly to their everlasting state. All the plagues of human life united have never at any

= { any time produced so much devastation in the human species as what is called *physic* alone.

Amongst the various evils which have arisen, and still arise from it, it is only in one instance that good has been produced.

Dr Brown, in the 35th year of his age, was for the first time seized with a fit of the gout. He was told by a great leader in the profession, that, as he was of an uncommonly vigorous and healthy constitution, and “as *plethora* with concomitant “vigour, in consequence of *ingestion* prevailing “over *egestion*,” was the undoubted cause of the disease, porridge and other vegetable matter employed as aliment, with a strict abstinence from every form of animal-matter, promised almost a certainty that he would never have another fit. The Doctor had long before this been dissatisfied, and even disgusted, with all the theories in *physic* *. But he was not yet convinced that a world of men would combine to deceive him with their facts. He took this, therefore, as a fact; the result of much experience, and accurate observation. He had hitherto almost never experienced pain, and the pain of the gout was rather too exquisite for the first trial of his patience. Betwixt his diffidence in the theories, and some reliance on the facts of medicine, he resolved to risk the experiment. For the course of

* See page 1st. of his Preface to his *Elem. Med.*

of a year, he made water his only drink, and pure vegetable matter his only food. The event of this regimen was, four fits of the gout, each of them of six weeks continuance, before he had any use of his affected limb; and indeed, through the whole year, it was but a very short time that he had the free use of it. After this experiment, his distrust of medical facts commenced. He thus reasoned with himself: If plethora and vigour were the causes of this disease, occasioned by repletion proving an overbalance for evacuation, why did it not happen ten years sooner? especially as he could recollect, that, both at that time, and before it, and after it, his indulgence in food and drink had been greater, and his exercise less, than they had been for a considerable time before this attack of the gout. A thought which placed the theory and pretended fact, by which he had been led into so much torture, in a sufficiently ridiculous light, was the following: If a man gets too much blood, and too much vigour, by excess of aliment, and a deficient habit of exercise, at any period of his life, suppose it 25, will the fulness, arising from that mode of living, still meet him after that its cause has been interrupted? and when the interruption of the fulness has taken place, suppose for a full year, will the effect all this time remain lurking in the habit? or, after a man has abstained

abstained from meat and drink for a week, suppose him before that time to have overcharged himself with both, will he still remain in the same debauch? will he find his stomach and system of vessels still overloaded with food and chyle and blood? and, if he is a young man disgusted with his studies at the medical college of Edinburgh, will he still be running about the streets breaking lamps on the eighth day after his intoxication? We apprehend that the bulk of our readers will not be of that opinion. This, however, is a good example of repletion producing plethora at a distant period; and plethora producing the gout, or any other disease of the same state of the system upon which it shall be proved that the gout depends. The probability with respect to the young gentleman is, that the consequence of a week's abstinence from eating and drinking, might be death, at least a complete cessation of that furious activity that could enable him to run about doing mischief. If such would be the effect of plethora, corrected by a week's abstinence, surely it much less can be supposed, did this philosopher reason with himself, that plethora could survive its cause for ten years, or even one year, or half a year, or an instant of time. In the prosecution of the best medical reasoning, he had been obliged not to acquiesce in, but to be doing with, such logic
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as the nature of the thing in its present state would admit of.

He now began to see that he must give up the logic, the philosophy, and the facts, of physics altogether; that he must forget all his reading and all his knowledge; and, if he did not burn, as Paracelsus did, all the books that came in his way, he must shut them all, and seal each of them with seven seals, till he saw what he might make of his own thoughts.

The first thing that struck him in his future plan of pursuit was, that an effect could not survive its cause; that the same cause could not produce different, much less opposite, effects; and, that the same effect could not arise from different, much less opposite causes. He perceived, that the human machine was nothing in itself, but in constant and momentary dependence upon a number of powers, perfectly distinct from it, the operation of which was necessary to its existence. His intercourse with the means of life, and his observation upon these, taught him, that men who are well nourished by food and drink were strong; and those who had a scanty allowance of either, but especially of both, were weak in all their faculties both of body and mind. He had observed, that farmers in Scotland in good circumstances, were much stronger than their labourers; and that farmers in Eng-
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land in proportional circumstances, were as much stronger than them. He had been told, that 12 seapoys in East India, could not do the work of one English servant. He had been informed, that, in some counties of England, the farmers would not engage their servants unless they undertook to be very dextrous in swallowing the most nutrient animal-food. He had discovered the field-work in Scotland was tardily carried on by the labourers, especially the reapers, whose labour is the severest of all; being supported by nothing but porridge at the rising and setting of the sun, and coarse barley or oat bread distributed to them, not in excessive proportion, at dinner, along with a plentiful proportion of broth, consisting of nothing but water and purgative fermenting vegetables. Nay, at the very time in which I write this, a farmer came to the grass-market of Edinburgh, who, after he had made his bargain with the reapers for the ordinary hire, at last told them that he was to give them no suppers, because it was not specified in the bargain. It had never been dreamed of before, that, after the miserable allowance of meals thro' the day, any person in his senses would cut off the supper of porridge. Indeed, immorality could not be the man's motive. His conduct flowed not from œconomy: It was the result of the ignorance and stupidity of a fool, who thought
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that labourers could go through the greatest and most tedious of all human labour, without the support of food. The innovation, however, was quickly understood. The reapers knew their right. Use and wont, a phrase in Scotland for perpetual custom, was pleaded without losing much time upon reasoning. The extortioner with an hundred reaping hooks was immediately surrounded; and was in the fairest way to be reaped himself, and to have all below his head left for stubble. The guard of the city of Edinburgh was sent for, but they were sent for in vain. They either would not quell the insurrection, from partiality to their Highland friends; or they could not, either from a defect in their military discipline, or a degeneracy in their spirits in consequence of their long residence in the low country. No less was necessary to settle the effects of this infringement upon the rights of men and upon the Brunonian doctrine, than a regiment of soldiers from the castle.

He had further perceived, that meat and drink only were not sufficient to support animal-life. He found other circumstances, which he has enumerated in the 6th, 7th, and 8th, par. of his Elements, without any one of which he could see that life could not be supported for the shortest space of time. He next reflected, that a quantity of medical trash stood in the way of his conclusion.

clusion. After getting upon the fair road, in which nature's operations respecting animal, and therefore every mode of life, were to be prosecuted, he considered these with great composure as so many Jacks-and-the-Lanthorn, that had misled him from the right path into all the bogs and quagmires, over all the precipices, of delusion and error. He regretted the time that he had lost in the tractless wilderness of false speculation: But he consoled himself with the satisfaction of finding the truth at last. The sun of light arose in his hemisphere, and displayed all the objects around him in their true colours, and figures, and states. By the influence of this newly discovered horizon, he beheld the phantoms of innate powers of the living system; whether denominated *vires medicatrices naturæ*, or increased action of the animated system, or reaction, or critical days, or intermittent types, or irritation supposed to arise from spasm, or plethora, or mobility; as so many hobgoblins, which had led him a tedious, painful, fruitless, and malicious dance.

The same light disclosed to his eyes, other phantoms, which had formerly appeared to him more like natural figures, but that now stood forth in all the deformity and horror of infernal dæmons. These were symptoms as producing diagnostics; symptoms as forming the new department of
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nosology ; symptoms as estimated without regard to what they came from, or what might become of them. The sun-beams of truth exhibited all these appearances as a number of monstrous chimeras, to which there was no resemblance in the simple and just productions of nature, but the illusory abortions of the visionary and disordered heads, to whom the slightest glance of the beauty, uniformity, comeliness, proportion, and symmetry of nature, had been denied, and from whose eyes the book of life had been decreed to be shut for ever.

He now perceived, and has since demonstrated, that all the pillars, upon which the fabric of physic had stood for ages, must be tore up from their foundations, the rubbish cleared away, and the doctrinal as well as practical part of the profession placed upon a solid basis.

To return to the subject of the gout : After the former reasoning with himself against the commonly supposed cause and the method of cure of that disease, he observed, that the stimulant powers necessary to the support of life, could be applied in such a degree as to impair or even destroy life, in a short space of time. This is the noted effect of excess in drinking : And the deaths that stand on record, as produced by intemperance in eating, are so many proofs of the same effect, arising from excess in that mode of

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stimulus.

stimulus. Excess of passion, excess of exercise of the intellectual operation, excess in corporeal motion, all tend to the same event. Diseases and sudden deaths have originated from every one of these modes of excess in the use of the stimuli necessary to the support of life. He extended this observation, and found, that the same effect that could be produced by a high excess of the stimuli in a short space of time, would as certainly arise from a more moderate excess in a longer space of time. In this manner he discovered, that death is as unavoidable a result of the stimuli necessary to the production of life, as life itself*. This excessive use of the cause of life, he observed to be a state of debility: And, because there is a state of debility depending upon deficiency of stimulus, which is properly denominated *direct*, he called it *indirect* debility. All this view applied to the disease in question. He considered himself, some years before his first fit of the gout, as stronger and more full of blood than when it happened. Though he seemed stronger than many others, and perhaps was so, he did not judge of himself by that rule. It was a comparison of that kind that misled physicians to assert, that the gout was a disease of strong and robust persons. It is so: But they should have observed, that these strong and robust persons

* See his Elem. Med. xix. xx. lxi. lxiii.

sons were less so than they had been formerly ; in short, compared with their former state of vigour, that they were in a state of debility.

Finding, then, that debility, not plethora and vigour, was the cause of the disease, the indication of cure arose of course. It was, not to weaken the system by antiphlogistic regimen, according to the common practice, but to invigorate it ; only keeping within that excess of the means suited to the purpose, which terminates in indirect debility. Proceeding upon this cautious induction of facts, he saw before-hand, that the plan of cure he was to enter upon must be successful. And the event justified his expectation. In the course of two years, excepting two weeks, he had only one fit ; which, in violence and duration, did not equal a fourth part of any of his former ones. And he was certain that he had even accelerated it by a piece of improper management, which was, intense walking, and the use of tight shoes, and taking a purge of Glauber's salts to remove an inflammatory sore throat. Now, if, what every physician of any observation at all will most readily grant, be taken into the consideration, that fits of the gout become always more frequent as the disease advances in its progress ; besides eight fits, which should have happened within the two years we speak of, it is but a moderate supposi-

tion that four more should have been added. At that rate, the Doctor should have had 12 fits, instead of one that he had, in the course of the two years. Recollect also, that this was only a fourth part in violence and duration, of any of his former ones: And by multiplying 12 by 4, the effect of his tonic plan will come out to be a reduction of the disease from 48 to 1.

To such certainty has he attained in the knowledge of every thing that is either hurtful or serviceable in the management of himself for the prevention of fits, that he can bring on a small fit any time he pleases, by any one of the articles of regimen that have hitherto been depended upon as the only means of cure. Oat-meal porridge had been particularly specified to him as a very proper article in diet: And he had been advised to depend as much as possible upon this meal. But, though it was very agreeable to his taste, from his having been much accustomed to it in his youth; by taking porridge and ale at any time over night, he is sure next morning of bringing on all the symptoms of indigestion, and crudity in the stomach, with looseness of belly, that lay the foundation of a fit of the gout. And, if he does not prevent further consequences of this hurtful article of diet, by taking his breakfast early, even against his appetite; by either premising or subjoining to his breakfast a pretty strong

strong cordial; and even repeating that, if the continuation of the symptoms should require it; the disease will proceed till it assumes every symptom of a formal and regular fit of the gout. There

are, besides loss of appetite and sense of crudity in the stomach, nausea rapidly increasing till it terminates in vomiting; with pain somewhere about one of his feet, and even evident inflammation.

All this concurrence he can prevent, and, when already formed, remove, by the use of what he calls his *quickly diffusible stimulants*: Which are, any wine that is strong and sound and free of acidity, any strong spirit, opium, volatile alkali, and æther.

There are others, which, from the analogy of their resemblance to those we have enumerated, must operate in the same manner, and therefore produce the same effect. They are, camphor, musk, and some others that may be thought of. Finding any of the mentioned ones sufficient, he has not yet made any trial of these. Drinking the vin de Bourdeaux in Leyden some years ago, had the same effect as the porridge and ale: Fruit, especially apples and pears; all green pottage, especially cabbage; all the several roots which are used in diet, especially turnips; and even some which possess a considerable degree of aromatic quality, as Spanish radishes; all the legumina, except green pease taken in moderate quantity, with nourishing ani-

mal matter; and particularly pease-pudding, and
pease-soup, have in their turn brought on fits.
 The same has been the effect of all the malt-
liquors, especially strong ale, with a considerable
prevalence of acidity: excepting porter, espe-
cially when approaching to staleness; for bottled
porter, or any porter in which any considerable
fermentation is still going on, approaches to the
effect of the other beers.

These are principal particulars, which we think proper to take notice of at present. Suffice it to observe in one word, that the whole list of vegetable articles, except those forms of vegetable matter which possess a high degree of aromatic quality, and are therefore used in small quantity, and all sour, fermenting, or vapid drink, are in one degree or other causes of the gout. With respect to water, the result of his experience is, that, in the intervals of the gout, when a person is in his ordinary health, water, which is of itself a debilitating power, if conjoined with nourishing animal-food is of no disservice; but, at any time, in a podagric diathesis, conjoined with vegetable matter, it will add to the sum of debility occasioned by that kind of diet. And when the stomach is weak, either as preluding a fit of the gout, or implying a state of indigestion of any sort, pure water used as drink, and more certainly in persons who have been accustomed

to generous drink, adds great force to the effect of the other hurtful powers. This conclusion is derived from the most sure induction of facts. The Doctor lived one year upon water, during his confinement to vegetable food : He lived for another year on it, when he betook himself to his tonic regimen. In this case he drunk water with his meals, and abstained from all stronger drink, without any hurtful effect ; whereas, in the other case, he never used water to any extent, but with the most chilling, debilitating effect.

Infinite is the advantage that has accrued to the profession, from this well conducted scrutiny into every article of diet in ordinary use among mankind. The effects of it before, had not only been judged of at random, and therefore very false conclusions been drawn with regard to them ; but such has been the capricious consequence of chance, that over-ruled this whole affair, that it has most inexplicably happened, that two general conclusions, diametrically opposite to the truth, have been the final result of all speculation on the subject. One of these conclusions was, That vegetable food, as a part of antiphlogistic regimen, and watery or no drink, have been supposed the only proper means of preventing fits of the gout ; and full stimulant diet the only ones productive of them. The contrary has been proved to be the truth, by an ample induction

of facts, that all future observation will for ever confirm and justify.

Besides this account of diet in the conduct and cure of the gout, we have only to add, from the same authority to which we owe the former detail, that tho' vegetable matter has the hurtful, and animal, the beneficial, tendency, hitherto ascertained; yet, when the stomach is in its ordinary healthy and vigorous state, a certain portion of vegetable matter may be usefully conjoined with full meals of animal matter. For our author perceived, that the most filling and stimulant matter of that kind, without such a proportion of vegetable, failed in producing its best stimulant effect. He felt in himself, and inferred from the universal practice in meals, that without a portion of bread, and certain other vegetable matters, satiety was never obtained: that there was always what, according to vulgar perception, would be called a *want in the stomach*. He studied this affair; and the result of his study was, that there was a certain quality in alimentary matter which bore a certain relation to the excitability in the stomach *. This relation, he perceived, was a property in the alimentary matter, from its kind, not its quantity, to operate upon the excitability, and produce excitement. Such, he discerned, was the effect of all matter in so far

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* El. Med. vi. vii. viii. ix.

as it is alimentary ; but chiefly of animal matter, and very imperfectly of vegetable. And hence it is, that the former is so well, and the latter so ill, suited to answer the purpose of aliment. But after obtaining the best effect that could be procured from animal-aliment, the most proper in kind, and administered in the most exact quantity, there was still a stimulus wanting, arising from a different mode of operation. While he observed that animal aliment might be rendered so rich in quality, that the full stimulus arising from its quality might be obtained in a small bulk, still the meal would not be sufficiently gratifying without the taking in of some matter, which added nothing to the other operation but an effect arising from bulk. Eggs, for instance, are highly nutritive ; and greater nutrition still may be procured from jellies and rich soups : but nobody would be gratified with meals consisting of these alone. Hence he learned, that, besides the stimulus of aliment arising from its quality, which he therefore denominated *direct*, that another stimulus arising from quantity was necessary : to this he gave the appellation of *indirect*. As the direct stimulus arose from a certain quality, he saw it required certain matters possessing that quality in order to obtain it. These matters he found to be animal, possessing the quality in a high and suitable degree ; and vegetable matters, possessing

possessing it in a very low and imperfect degree. While the latter, therefore, were disqualified, as we have said above, from affording the direct stimulus, because nothing but bulk, giving distension, was requisite to the indirect, he saw that they would be suitable enough to effectuate it, however low they might be in the scale of direct stimulus that they contained, or perhaps though they contained none at all. He saw it was certain forms of matter, agreeing in containing in common the quality of direct stimulus, that answered the first purpose; but that any matter, whether its direct stimulus was weak or wanting altogether, provided it was not disagreeable to the stomach, would suffice for the second. Of this principle, so accurately explained and clearly stated, the application to practice was, that vegetable matter, in moderate proportion, ought to be united with such a proportion of animal, as would prevent bad effects arising from the former by the predominancy of its salutary stimulus: that, whenever a person found his stomach strong, and his system in perfect health, he need not torment himself by over-anxiety to avoid excess in the vegetable matter; and, on the contrary, that he may follow his inclination to a certain extent. But, upon the first feeling of indigestion, he insists that too much caution cannot be used; and he contends, that the only absolute

absolute security is total abstinence from every kind of vegetable matter.

In the course of this inquiry into the effects of all the several articles of diet, our author extended his observation to other parts of management. He went into the consideration of sleep and of exercise, and varied and repeated his experiments on both. Too little sleep, under his vegetable diet, he found a most prodigiously hurtful power. The diet weakened him excessively, and produced the effects we have mentioned; and this weakness was of the direct kind. His ordinary corporeal and mental occupations proved fatiguing, and therefore also weakening; but this weakness was of the indirect kind. The former originated from insufficiency of stimulus; the latter from the stimulus being carried to excess under the concomitant circumstances, and therefore rendering the system unfit for receiving excitement from it, by exhausting the principle upon which all the several stimuli only can operate in producing excitement, viz. the excitability*. As part of the debility was of the indirect kind, arising from the stimulus of mental and corporeal exercise exhausting excitability, and therefore suspending excitement, a sufficient quantity of sleep operated by suspending the ex-

* See the El. Med. ix. x. xv. xvi. xviii. xix. xxi. xxii. xxiii. xxiv.

cess of stimulus which produced this suspension of excitement ; and therefore by giving occasion to the restoration of the excitability, and an opportunity to the exciting powers, remaining in the system, to act with effect. Too short sleep, preventing the completion of this process, allowed the indirect debility to remain, in consequence of the excessive stimulus, exhausting the excitability, being not sufficiently suspended. This is the explanation of a fact that he had repeatedly experienced, viz. that short sleep is one of the most powerful causes of debility in general, and of gout in particular.

With respect to exercise, he found, that, either when very intense or unusual, it also proved very powerful in renewing fits of the gout. It has been said, that the first fit which appeared after the institution of the tonic plan of regimen, was induced upon the occasion of his having, contrary to usual practice, walked a great deal in the course of a day or two. And he has experienced, both before and after that time, that the fatigue of walking is very powerful in bringing on fits. That walking, in certain circumstances, could bring on fits of the gout, is a fact not unknown to former physicians. But as it clashed with another fact directly opposite to this, which was, that indolence and sedentary life, conjoined with full and stimulant living, was the principal circumstance that induced the gout at first,

first, and was therefore supposed still more certainly to renew the fits of the disease; from this seeming contradiction of effect and cause, physicians were all thrown into an inextricable perplexity; the solution of which, upon the Brunonian principles, is perfectly easy. Exercise, where habitual, and rendered safe by such habit, and never carried to an immoderate degree, upon the whole, affords a stimulus highly requisite to human health, and suited to prevent all diseases of debility, and the gout among the rest. The proper degree of it, producing this effect, depends not more upon moderation of its use, than upon a proper degree of stimulus being thrown in in the form of diet, to enable a person to endure it and be benefited by it. When, therefore, neither too much nor too little of the stimulus of food and drink is taken in; or, when any error in either of these extremes has been committed, if this has been corrected by increasing or diminishing the exercise in proportion to the deficiency or excess of the other stimulants; exercise, supporting egestion, and otherwise stimulating, so adjusted to the quantity of ingestion taking place, proves one of the most natural and permanent stimuli that can be applied to support human vigour, and prevent diseases. But the destruction of this balance, in consequence of too high a stimulus from diet constantly going on, and producing a gradual tendency to indirect debility,

debility, and a habitual deficiency in exercise, which is a means of direct debility, as implying that the proper degree of stimulus which it is calculated to give, is habitually with-held, is liable to produce other diseases of direct debility, and the gout among the rest. Hence it is that the luxurious and indolent are the principal, and almost only, victims of this and similar diseases depending upon debility, the chief and prevalent part of which is of the indirect kind. Again; when the stimulus of diet is employed in a very low degree, and that of exercise carried to its highest degree, which is a state of debility, the prevalence of which is of the direct kind; then it is that persons will not fall into the form of asthenic disease, to which the denomination of *gout* is given; but they will fall into other diseases of an equal, or even more pernicious, tendency. Dyspepsia, diarrhoea, sometimes conjointly, seldom separately, scirrhus, dropsy, or even proper fever, and such like forms of morbid state, depending upon direct debility, will be the consequence of such hurtful management. The diseases prevailing among the poor people, who are commonly starved, and oppressed with assiduous excessive labour, afford many instances of diseased state originating from this source of direct debility. This matter, therefore, placed in the light in which we have set it before the eyes

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of our reader, will explain both the cause of the error of physicians in supposing exercise, without limitation, to be an effectual means of preventing the gout; and it will point out the occasion of their embarrassment, upon finding, that after a person has fallen into the gout, any unusual exercise will bring back fits. If exercise be properly adapted in its degree to the stimulus of diet thrown in, no disease will happen. If the balance be destroyed, as in the first-mentioned case of erroneous management, the gout will not happen, but other forms of this same kind of disease will; which is a verbal, but no real difference. In the second case, the gout will happen; implying, that a disease of debility has appeared in consequence of the means necessary to the support of life having been carried too far, with the effect of inducing debility, upon a principle now often explained, and by this time sufficiently familiar to our reader: for we must take it for granted, that, from the explanation already given, the principles of this doctrine are sufficiently cleared up, at least in so far as we have occasion to touch upon them. But as the principles of the whole are necessary to the understanding of each part; and as it is not the intention of this Essay to enter into a full exposition of it, that having been done sufficiently clearly in the introductory part of our author's work already delivered

vered to the public, and in his lectures; we must therefore beg leave to refer such of our readers, as may wish for further information, to these departments of his labour; and indeed we would recommend a diligent attention to the whole. With respect to exercise, we conclude, that uniform, equal, and gentle exercise, conjoined with the plan of regimen detailed as above, is the proper method of preventing fits of the gout; but that excessive exercise, or a sudden transition from sedentary life to a degree of it not immoderate in itself, but rendered so by abstinence from the due degree, is alone, and more certainly when conjoined with the other hurtful powers, a most powerful cause of the return of paroxysms.

As the gout is a disease of debility pervading the whole system, but more especially affecting what the Doctor calls the internal and external surfaces of the body; that is to say, the stomach and the rest of the alimentary canal, and what is known to every body by the appellation of *external surface*; in the former of which it manifests itself by all the symptoms of indigestion and a weakened state of the intestines; and is as discernible in the latter by a sense of languor perceptible in every part, where it shews itself by that feeling of which every person can conceive an idea from the recollection of his feeling, especially in his thighs and legs, either when he be-
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gins to be under the influence of sleep, or when he is awaked from sleep before it has had its full course. It is therefore next to be observed, that besides taking a proper quantity of sleep, and supporting the internal surface by proper dietetic materials, the tone of the external surface should every where be sustained by the application of a proper degree of temperature. And as the legs and feet are peculiarly liable to the prevalence of debility, they should therefore be carefully kept warm. Silk stockings, unless used as upper ones, should be avoided, especially in winter, by every podagric, and worsted ones, with flannel socks next to the feet, only used. To illustrate the propriety of this direction: Among other hurtful powers by which he can bring on a little fit of the gout at any time, he can produce the same effect either by curtailing his sleep, or exposing his body, especially his legs and feet, to cold alone, and more certainly cold conjoined with moisture.

After thus fully instructing himself in the nature, cause, and cure of the gout, and finding himself highly rewarded for his discovery by the great abatement of pain and distress which he had experienced in consequence of a different practice, he rested satisfied with the progress he had made in the knowledge and treatment of the disease, and thought it unnecessary to give himself the trouble

of shortening or alleviating fits when they occurred. A difficulty, however, still remained, which his pupils, desirous that the doctrine should be as perfect as possible, wished to have removed, and which his opponents urged as an objection that affected the whole doctrine. This difficulty was, how to explain the inflammatory part of the disease. It seemed to favour the doctrine of reaction, and therefore to strike at his most fundamental principle. And there was the appearance of other phænomena concurring with it. The principal of these was the hot fit arising in agues after a certain course of cold fit. And he discerned that his opponents, if they had any ingenuity, might muster several other true or false facts, bearing the same import, against him. Inflammation affects the throat in the gangrenous sore throat: for which reason it is that the last person, who has employed himself in nosological writing, has placed it among the most phlogistic of all diseases, the *Phlegmasiæ*; and associated it with the inflammatory sore throat, as a principal species of the same genus. Staahl and his followers raised a general persecution against the bark of a tree, the celebrated Peruvian bark, upon a supposition that its use in intermittent fevers produced inflammatory congestions in the abdominal viscera. And such is the diffidence, among even the greatest physicians, of their own
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opinions and little theories, that Boerhaave himself was partially infected with this hypothesis of the effect of the bark; and, though he did not banish it from the practice altogether, as the Staahlans had done, he interdicted its use in the beginning of these fevers, upon a supposition that it was its early use which produced the effect already mentioned. Every physician, the least conversant in practice, reports to us, that, in the very extremity of nervous or putrid fever, to which the pedantry of nosologists gives the name of *typhus*, actual inflammation frequently affects the brain.

From all which facts, that the reader may be prepared to understand and judge of the objection that the opposers of this doctrine might infer from them, suffice it to say, that they would suppose the hot fit of intermittents, the inflammation of the fauces in the gangrenous or malignant sore throat, the inflammatory congestions arising, or supposed to arise, in the course of intermittent fevers, and the real or imagined inflammation of the brain in the end of typhus, as they call it, to be so many instances of reaction, of morbid or pernicious tendency; and that the inflammatory part of the gout is of the same import. This was a seeming induction of facts, staring his doctrine in the face, and striking at its root. It was his duty to gratify his pupils with a just explanation of it; and

was the common interest of the cause to silence his adversaries. The manner in which he did so claims attention. He had brought on a slight fit of the gout by unusual exercise in walking. This was an opportunity for making an experiment, which was to decide the whole controversy. A person called for him before dinner, who was in a way of business, that led him to drink in the forenoon. He expected a glass from him, and was gratified. The Doctor, for a reason that the reader must perceive, collected half a dozen of his principal pupils * to dinner, and drank with them till he only, in consequence of what he had taken before, was considerably affected. He told them he had planned some degree of intoxication in order to explain many inflammations, which were universally understood to be accompanied with, or to depend upon, phlogistic diathesis. Before the application of the stimulus we speak of, he had not been able to put his inflamed foot to the ground, and had supported

* These gentlemen were, Dr Edward Stephens, Dr Wainman, Dr Byam, Dr James Campbell, Mr Richard Codrington, Mr John Watson Howel, and myself. The reader will readily judge from this performance, what credit with him I merit for the knowledge I may have acquired of this doctrine; but I beg leave to inform him, that the judgment, candour, and ingenuity of the other gentlemen, and their equal acquaintance with the doctrine in general, and with this particular fact, completely qualify them for being proper vouchers of it.

supported himself, in any little motion that he chose to make through the house, by his sound extremity, assisted by the use of a staff. But before he dismissed his company, he recovered the perfect use of his affected leg. The inference from which is plain, viz. that the inflammation in the gout does not depend upon excessive vigour occasioned by the excessive use of stimulant powers previously applied, but upon a state of the system diametrically opposite to that, viz. debility induced by a previous application of weakening powers; and that its cure is not to lower the vigour of the system by the use of debilitating or insufficiently stimulating powers, but to raise it by the use of powers highly and quickly invigorating. And the benefit redounding to the curative part of this, and other diseases, accompanied with a similar kind of inflammation, must be obvious to every one. The fact is not limited to the case of the gout, though it would remain still a highly meritorious one if it were so; it grasps all the other cases we enumerated.

With respect to the inflammation, real or supposed, occurring in the end of typhus, in a course of symptoms of the highest debility compatible with life, manifested by signs of excitement in the head, and particularly raging delirium, an equal satisfactory experiment proved the application of the fact in question to that case.

case. A friend of mine lay in a fever. He was treated in the ordinary way, excepting that he had a scanty allowance of wine; which is a practice beginning to take place among the most violent and powerful opposers of Dr Brown, in consequence of these practitioners perceiving, from its successful use in his own hands, and in those of his followers, that it will obtrude itself upon them at last. But their prejudices in favour of the old practice, with which they have been early imbued, oppose an unfurmountable barrier to their using it, and the other diffusible stimulants, in that liberal and copious manner in which only it can be of use. Notwithstanding, therefore, of the wine that was given him, the symptoms of weakness went on and increased, till it was plain, even to a good woman who attended him as his nurse, that death must be the consequence of the plan of cure, hitherto pursued, being further continued. He had all the symptoms of approaching death; and from which she, in a large course of practice in her way, had never seen one recover. This declaration she made to me in the presence of the landlady of the house. So certain was their expectation of his death, that the cloaths in which he was to be interred had for some time before that been every night laid out. The physicians who attended him suspected that there was a Brunonian,

as they call the followers of the new doctrine, in the number of the friends who attended the patient; and if he ventured to prescribe any thing for the patient, that it would be according to the doctrine which he adopted, and therefore very different from theirs. The nurse was therefore very strictly charged, upon pain of all the mischief which they could do her in her way of business, to see their prescriptions executed, and to admit of no other. That such was the threatening conversation they held with the woman, I am warranted to infer from her own assertion; that she had hitherto prevented my interference, because her means of living were at stake. But now, as nothing but death presented itself to her expectation as the result of the ordinary plan of cure, she thought herself justified to God, but not to man, in allowing the new mode of cure as fair a trial as the short space of life that the patient seemed to have before him would admit of.

To explain my assertion of her not thinking herself justifiable to man, her words were the following: "I shall give your doctrine a complete trial, upon this condition only, that you will keep the secret. My bread depends upon it. I am ruined if what I am about to do be divulged." And if ever it comes out, I tell you beforehand, that I will deny the whole

“ matter.” In consequence of this paction, opium in large quantities, because spirits and wine could not be poured in, was administered from 12 o'clock in the day through the course of the night. The consequence of which was, the next morning pretty early, when the physicians visited him, that they declared him free of fever, as I am told; and, as a proof that they thought so, ordered him chicken and chicken-broth. He remained in this happy and unexpected state till the afternoon about four, when he was seized with a raging delirium. This alarmed the nurse and myself. I then consulted Dr Brown what I should do with my patient. He was not alarmed for the nature of the thing, but for the consequences, if the former plan of cure were returned to, which might prove a cause of the patient's death, and might afford an opportunity to other physicians to impute that death to him. The rumour, spread among the people in consequence of such a report from physicians of reputation and influence, might, he easily perceived, terminate in his ruin. I told him the nurse wished to see him; and he desired her to be brought before him. She asked his opinion of the case; and his reply was, That there was scarce a physician any-where, and more certainly those attending the patient, who would not assert, that the present formidable symptoms were the effect

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of the high stimulant powers which had been administered to him the night before. But he added, that if the same mode of cure were not continued, the patient would certainly die of a very different affection from that which they would contend it was. He endeavoured to assure her, that there was either no inflammation in the case at all, or that it was a very different affection from the inflammation that physicians were acquainted with : That, instead of requiring bleeding and other evacuant antiphlogistic means, it required the very same treatment which had been last employed. He appealed to the beneficial effect of that treatment in support of his opinion; and he asserted with confidence, that the intermission of the stimulant powers thro' the course of the day was the cause of all that had happened : for she told him she had given nothing of that kind during the day, from the full persuasion that the patient's disease was removed. The purport, in short, of all this, is, that the present affection was a disease of debility of the whole system, predominant in the brain in consequence of the great sinking of strength, which constantly follows a total cessation of the use of such highly stimulant powers ; and that a sinking was a consequence of the cause assigned, in every state of the human body ; that dejection of spirits, anxiety, sadness, and every symptom of

of diminished vigour, were the ordinary results of a quick transition from debauch to abstinence. He begged, therefore, as the life of a fellow-creature was at stake, and as she had been so late a witness of the good effects resulting from the method of cure, the continuance of which he still recommended; that she would not allow prejudice, and impressions from false theories of physicians, among whom she had been conversant, to prevail over the high probability of success from this mode of cure. He dismissed her, after obtaining a promise that she would continue the plan of cure in question. The prejudice we have spoken of had prevented her from completely fulfilling her promise; as appeared by the consequence next day: When I went back to the Doctor, and told him that the patient's raging delirium was now over, in consequence of an imperfect renewal of the stimulant plan of cure; that he was now seized with a coldness of all his extremities, proceeding rapidly to the more central parts of his body. Now, said he, is the time to ply the most powerful stimuli; as the nurse, from a thorough conviction of this being a symptom of instant death in all the cases that she had ever seen, can possibly have no objection to this plan of cure, after constantly finding every other fail. She might have been afraid of it during the continuance of the delirium;

rium ; but that apprehension must vanish in the present case, in which it must be natural to her to expect, that exciting the system promises the only cure of a case, that must evidently appear to her to depend upon a sinking of the vital energy. She was accordingly very readily prevailed upon to throw in very plentifully the strongest cinnamon spirit and rum. The effect answered the Doctor's prognosis. Next day the patient was altogether freed from his disease, and never had another relapse. This cure gave great vexation to the attendant physicians, and all their partizans. Without giving Dr Brown the least opportunity to vindicate himself from their accusations, by spreading these through all the numerous circles of their friends and his enemies, they had very near ruined his character as a physician, and as a man. They did me the honour to involve me in his cause. Their accusations against us both were, That we had clandestinely, and without authority, interfered with their patient, and thwarted their method of cure. They had consulted lawyers, to raise a prosecution against us. They had deliberated about bringing us before the tribunal of the college of physicians. In short, nothing less was their aim than the ruin of an honest man, and of a most beautiful and numerous family, for saving a man's life. The news of this reached him, and he received certain

tain information of every thing that the most active person in the plot was doing against him; of whose folly and malice the rest made a handle. And, last of all, such was their inconsistency, that they made an attempt to disprove that our method of cure had ever been employed. One of them held private conferences with the nurse; and after employing every mode of intimidation which her obnoxious situation suggested, he prevailed on her, as he said, to deny that any part of our mode of cure had ever been administered by her. She was said to have confessed, that she had deceived me, to get rid of my importunities: And they even circulated a story that I had offered her a bribe. All this was weakness and impotence. It was devoid of truth: it even wanted coherence. And the whole fact hung upon the testimony of a poor woman; who, if she acted the part that was alleged, was impelled to it by her situation in life, indigent and at their mercy. The reader will perceive, thro' the whole of this process, a shameful unfairness and meanness, unworthy of a set of men, whose profession, if they executed it with liberality, would entitle them to the rank of gentlemen. It was unfair to spread the grossest insinuations against any person's character, without first confronting himself with the accusation. It was mean, and implied consciousness of the badness of
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of their cause, to hold private conferences with a silly dependent old woman, in the absence of those whom it so highly concerned to have been present to ensure fairness. Circumstantial evidence, the best of all evidence, is totally wanting in their tale; deep malice can be proved, which makes further against their candour and veracity. And who in his senses, under these circumstances, would place any dependence upon the testimony of a woman in the situation described, or oppose it to a chain of consistent testimony and internal evidence that presents itself on the other side of the question? The reader will recollect the answer to the woman's real, or supposed assertion, of her deceiving me, That she declared before the landlady of the house, that she would make a full trial of my mode of cure. And I must be allowed to affirm, that I saw the first dose administered. It was also before the same other woman and myself, that, upon finding the patient so perfectly relieved next morning, she declared that I was the *only doctor*, for that I had saved a life that infallibly must have perished.

The first evening of the commencement of our cure, after two exceeding large doses of laudanum had been given, the patient, who had not slept for 48 hours before, was enjoying a most refreshing sleep, and so much better in the other
symptoms,

symptoms, and particularly in the reduction of his pulse from 112 to 92, that one of his attending physicians owned before me at the bedside, that he was even then surprisingly altered for the better. Further, will this nurse deny, that she came to Dr Brown's parlour along with me, and had the consultation about what was to be done with the new symptom of delirium? And is it possible, that she can have forgot the purport of what the Doctor said on that occasion? that she told him she had been equally surprised at the wonderful relief obtained in the morning, and alarmed at the formidable relapse in the afternoon? At this interview none were present with her but the Doctor and myself. But it was known to several, and particularly to Mrs Brown and Dr Wainman, that she had been there. And all the subsequent steps of the cure were every day communicated to some particular friends; who, if this should any more be called in question, are ready to give their testimony to the truth of this whole process as we have related it. I myself attended this case from the beginning to the end of it, at least four or five times every day; and I do here give my most solemn declaration, that the whole relation here made to the reader is truth. It is not amiss to take notice of a circumstance that occurred early in the disease, in further corroboration of what

what has been said. One of the physicians, who continued his attendance afterwards, was somehow or other called in against the patient's consent. He ordered him tartar emetic, which the patient by my advice refused; in place of it, the most diffusible penetrating and powerful stimulants were given in large quantities, and with great success. The physician returning next day, perceived him much relieved. And when, the next day, he was going to impute the merit of the service done the patient to the tartar emetic which he had ordered, he was then told the patient had refused it, and in place of it taken a large dose of laudanum, vol. alkali, and cinnamon water. Upon hearing that, he shook his head; meaning, according to the practice of the opposers of the new doctrine, that this significant nod should pass among the by-standers, as a proof that there was some mistake in the case: but a paleness was perceivable in his countenance; and conclusions were drawn from that, which overbalanced the effect of the nod. To do justice to every man, and prevent mistake, as there were two physicians attending this case, the physician we have last mentioned was not Dr. Monro. By and by, a little wine was ordered, but not by Dr. Duncan.

I shall finish this vile affair, by vindicating the character of my worthy preceptor, as a man and

as a liberal physician. Few persons would think it a great crime in any one, if he saw another killing a man, and had it not in his power to avow himself his deliverer, to save his life even in the most clandestine manner. This simile, however, applies not to the present case. I attended the patient in question, from the beginning of his fever till the consummation of his cure; and I was about him before any practitioner was called in. I from time to time consulted the gentleman I have so often spoken of. He gave his opinion of the case, as one in which I was more properly concerned than any person about the patient. I was his friend; I had done him service before, as will be taken notice of in a full history of his complaints, to be subjoined to this account. One of the physicians was called in by no other authority than mine: the other, by none at all, at least not by mine; and, as I have before observed, against the patient's consent. My reason for calling one of the physicians was, that, as I knew from his Lectures he was no friend of the spasmodic doctrine, I hoped he would lay down a different plan of cure from the evaculatory debilitating one, which that doctrine suggests; that we would have nothing to do with the most pernicious and destructive of all powers, which upon any occasion have been ever employed as remedies in fever, *tartar emetic*; and

and lastly, that he would, upon a fair and candid recital of the plan of cure, so successfully used by Dr Brown and his pupils, be induced to concur with him in his salutary practice.

These were my expectations; and they were the more sanguine, that I knew the common method of cure of fever had been for a long time altogether abortive. The deaths of students, not to say of others, for 20 years back, so well known to every one, and often so unexpected from the mild manner in which the disease commenced, could not fail to have loosened any man's attachment to that mode of practice, and prepared him for the reception of one so much preferable to it in every respect, and which had never failed even in the worst cases.

I communicated this reasoning with myself to Dr Brown. His answer was, That it was very bad; that I was unacquainted with the interested arts of those men; that all their ideas in medicine, and particularly in its practical part, were so diametrically opposite to his, that they never could be brought to any sort of reconciliation. And lastly, he informed me, that his doctrine and practice had touched them so much in their tenderest and most exposed parts, that their passion and hatred to him had got the ascendant over their reason, so that there was not the most distant hope that a meeting betwixt

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him

and any of them, would be productive of either harmony or common decency ; in short, that the only plan of conduct they could hold towards him was to seek his ruin.

Non levia aut ludicra petuntur,

*Sed Turni de vita et sanguine certunt *.*

This he quoted on the occasion. However, continued he, as a man's life is at stake, and as he was certain for himself that he would act a part for which he could acquit himself to the public and his own conscience, he would meet with this gentleman, and hazard every consequence of such a meeting ; provided I waited upon him, and gave him full intimation, that he himself had been called in by me in expectation that he would proceed candidly and harmoniously with Dr Brown in the treatment of so difficult and dangerous a case : And he added, that I should communicate it to this gentleman, that, in consequence of great service having been rendered to the patient before he fell into the fever, by Dr Wainman and me as pupils of Dr Brown, he had entertained a good opinion of his abilities as a physician, and that he was therefore the only physician whom he had any desire to attend him. His constant cry, after the disease arose to an alarming degree of violence, was Dr Brown, with whose name he always conjoined mine.

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* *Virgil.*

This is a truth that cannot be denied, and that the nurse dare not deny. This whole conversation passed between the Doctor and me, in the presence of another gentleman; who, after the great noise about this cure had commenced, and when the Doctor was now accused of having clandestinely, and even illiberally, interfered in, and counteracted other people's practice, asserted before several gentlemen, that he had heard and could vouch the truth of the whole: And these gentlemen are still ready to attest their remembrance of this gentleman's declaration. Upon recollection, however, and receiving a very different advice from other friends, who were of opinion, that no good could come of the proposed meeting and coalesced plan of cure; that they were too much fettered by their prejudices, and impelled to opposition by interest; and too severely hurt, from his repeated success in a method of cure diametrically opposite to theirs, for such mutual advances being made between them as could terminate in any consistent plan whatever; besides, that there was danger of ill blood and indecent conduct in the parties to each other: Induced by these considerations, I never made the proposal to the physician we speak of, which Dr Brown had so particularly recommended to me. This, with respect to the physician of whom I have been speaking, must appear a satisfactory

and honourable vindication of that gentleman from the most unjust charge of having clandestinely interfered in, and illiberally counteracted, or attempted to counteract, the practice of other physicians.

With respect to the other physician with whom we have had concern in this case, our process of vindication is very short. One of the most accomplished gentlemen and intelligent physicians who have embraced the new doctrine, and who had surrendered a great deal of prejudice against it to a full conviction of its truth, of which he has at all times made the most determined and open avowal, Dr Stevens, was desired by a friend to take advantage of a certain intimacy and connection that he had with the other physician of our patient, and, as a friend, to inform him of the great efficacy of the new practice, and put him in mind of the futility of the common one; and to assure him, that, from repeated experience of his own of the great success of the former, and from every body's knowledge of the inefficacy, if not hurtful tendency, of the other, there were not the least hopes of recovering this patient from so alarming a concurrence of symptoms, unless the plan of cure were conducted totally according to the precepts of the new doctrine; to demand his giving it a fair and candid trial, as the decision of the controversy was so closely con-

connected with the dearest interest of humanity, that of preserving life, and averting the danger of death. Dr Stevens replied, That he doubted if he could use such freedom with this gentleman, as he knew his opinions to be of a very different nature; and was apprehensive that he could hardly be induced, by any arguments that could be urged in a short conversation, to alter a practice he had been accustomed to for so many years, and in which he was countenanced by most medical practitioners. He went, however, and saw the patient; and reported, that the case required the most accurate application of the new plan of cure: that there were not the least hopes that either of the attending physicians would yield to any part of it. He added, that he deeply regretted the state of physic; that he dreaded the event with respect to this patient; and that neither he himself, nor Dr Brown, could be of the least service in the case, unless they were left at full liberty to urge the new plan of cure in the most complete manner. It was his opinion, therefore, that neither of them should interfere, as it might be attended with very disagreeable consequences.

The reader will now perceive, from a cloud of witnesses, and from a chain of facts, all connected with and supporting each other; from a full exposition of the motives, intentions, and

well-known conduct of the opponents of the new doctrine and its author ; from the surprising cure performed in this case, compared with the fatal tendency and actual fatality of the ordinary practice, even in the mildest cases ; from the corroboration that the new practice in the cure of fevers receives from the similar success of it in all other idiopathic, nay, even in local affections ; from the known interestedness of medical practitioners, especially those who teach and take the lead in the profession, impelling them at all times, and never more than at present, to oppose every innovation, however much it might tend to the improvement of the art, in proportion to its tendency towards the subversion of the systems or doctrines from which they derive all their profit and significancy : Lastly, When to all this is added, that the Doctor, from his love of truth, and profound regard to the highest temporal interests of mankind, has engaged in an enterprize that few men, at any period of civil society, have had either the boldness or the disinterestedness to undertake ; in which his reading and observation could not fail to inform him, that he was retarding, if not marring altogether, his advancement in his profession, by opposing in the most determined manner every view in physic which its practitioners hitherto had inseparably connected with their profit and avarice : From all this the reader, I say, will readily perceive to which side

side of the dispute he ought to attach his approbation; I mean the dispassionate and disinterested reader. His situation with respect to his opponents is very similar to that of the apostles with respect to their opponents, the trinket-makers and jewellers who were employed in working for the temple of Diana at Ephesus. These men, said they, and their gospel, we must oppose; and support the old religion, it being by it we have our bread. He could not but recollect the persecutions excited against Martin Luther for the improvement he had made in religion, and the spirited boldness by which he called in question the infallibility of the Pope. He must have remembered the repeated attempts made to assassinate the great, the wise, the patriotic, and the good, Father Paul. The inquisitorial tyranny by which the great Galileo was obliged to recant his most important discoveries, could not escape him. He must have had other examples, still nearer home, before his eyes. The opposition to Lord Bacon while he was known to be premeditating the most valuable work that had ever been given to the world; and the consequent slow advances he made in his profession, at least for a long time *: The fate of the two pensionaries of Holland, the De Wits, for their patriotic opposition to the incroachments of the House of Orange

* See Bacon's Letters, and Hume's History of England.

Orange upon the public liberty ; and their efforts to suppress and prevent that system of political influence, which, since their death, has established a complete system of domination in Holland, and left nothing of a republic but a name : The considerable length of time that it took to suppress opposition, even to the system of the immortal Newton, and to give it a full establishment ;—must have all crowded in upon his reflection. And, to bring the matter home to the medical department, the opposition made in Alexandria, in the reign of Ptolemy Philadelphus, to the introduction of anatomy among a people, whose superstition taught them that they were defiled and polluted by the contact of the dead ; the ejection of the celebrated Galen by a violent party, who overpowered him at first, and might have done so for ever, if he had not had the good fortune to come into the good graces of the empress Faustina, whereby he received the protection of the emperor, which set him over the heads of all his enemies. These were a selection of many instances which might be adduced of the interestedness, bigotry, narrowness of mind, and virulence, of medical practitioners in former times. But the narrow and late escape from ruin that Harvey made for discovering the circulation, and Sydenham for establishing a salutary method of cure in phlogistic diseases, will perpetuate

perpetuate the illiberality and malignity of physicians, in consequence of their having at all times considered their profession as liberal only in name, and in show, to the people, but in reality as a trade for making money by all the artifices and intrigues that avarice naturally invents for its own gratification. These, he must see, were held up to him as a mirror in which he might behold his own case. Though the *Materia Medica* might usefully be stripped of the far greatest number of its articles, and with great benefit to every part of society, except apothecaries, and the practitioners who rely much upon drugs; the Peruvian bark, however, belongs not to the part which ought to be rejected: and yet, not only upon its first discovery, and while the knowledge of its efficacy was as yet confined to a few, but even the testimonies in its favour were indisputable, and the trial of its virtue open to every one, was that excellent remedy banished from the practice of medicine, both over Germany and in many other parts. Opium, the most excellent remedy, the most powerful and quickly diffusible stimulus, and proved, especially by the new doctrine, to be the most effectual supporter of life in that rapid sinking which so often eludes the efficacy of all other means, and, to the disgrace of the profession, has cost, and still costs, society so many lives,

found

found its way very slowly into general practice : and when it came into any sort of use, was, and is still, used in such sparing quantity as seldom to produce any benefit. Nothing was more common in Edinburgh, within these 20 years, than the administration of laudanum, in the cases where it was supposed to be indicated, from five to ten drops. It was thought, and the opinion still remains, that to raise the dose to 20 or 25 at the utmost, was a great and bold improvement. But that is not the fourth part of the quantity in which it ought to be used in the cases where it is only required, which are those of ultimate debility, since wine and spirits, more or less diluted, supersede its use in cases of less debility. But the truth was, physicians neither knew the operation of this valuable remedy, nor the nature of the diseases in which its use is required. They supposed it a sedative ; but if it had been so, how came they to this very general agreement, that it is hurtful in phlogistic diseases ? It is only useful in diseases of debility ; which is a fact that Dr Brown has proved to a demonstration *. It is useless to multiply examples of the persecutions that have been raised against the greatest, the wisest, and the best of men, merely for their having

* See a medical dissertation, published at Edinburgh in 1779 by Dr Stewart, *De Spasmo*. See also the discoverer's own Lectures,

having rendered the most material service to society, that of making noble and useful discoveries. Human nature, when not biassed by false views of its own interest, which unhappily mislead, too often into crimes, the greatest part of mankind, as the history of man's actions in a civilized state in all ages evinces, is social, beneficent, and kind. But as soon as the plan of self-gratification is laid by any individual, without regarding the justice that he owes to other individuals, and to society at large, he constantly rushes on to his favourite object, regardless of the means, honourable or base, provided he may attain his end. When the predominant passion of any one is to set himself above others who are his natural equals in the simple congregated state of man, all other passions are suspended or rendered subservient to it; all the rights of other members of society are disregarded and trampled upon. Hence arise all the invasions on public and private rights. Hence a Cæsar or an Alexander will have the ruffian assurance to subject a world to their domination. Hence Xerxes will scourge a million of slaves over the Hellespont, to extinguish human liberty in the only little spot where he knew it existed, in its most comely and estimable form, and gave his highest dignity to man. Hence a Catiline, a William the Conqueror, a Cromwell, have made their more limited

mited depredations upon mankind. Hence, in private societies, the turbulence and intrigue of ambitious members. When riches are the grand object of pursuit, the widow, the orphan, the innocent helpless suckling, must resign their only means of existence to the gratification of this infernal passion of their oppressor, and insure its object by a total privation of every means of opposing it, or give it ultimate security by their expiring breath. If both ambition and avarice be united, as they often are, in the same character; which is the case with statesmen, courtiers, ministerial or antiministerial, and private corporations of men, honoured by the public with distinction and emolument, for some virtuous purpose, in a community which they now begin to disregard in proportion as they grasp at their rewards; then it is, that all the mischief flowing from both are perpetrated at once. Such are the sources of the numerous train of evils that infest human life. The love of pleasure, in its strict sense, as distinguished from avarice and ambition, might appear a third one; but as its object cannot be attained without the one or other of them, it is therefore comprehended under them. Eating, drinking, commerce between the sexes, dissipation, idleness, varying the voluptuous scenes, cannot be pursued in civil life in the enormous degree in which nature, when

once

once depraved and debauched, demands, without encroachments upon the rights and properties of many. But it is only the rich and powerful that can carry this species of injustice and oppression to any considerable extent. The luxury of the indigent and weak naturally circumscribes itself within very narrow bounds. Cunning and address may enable a few adventurers to go a certain length in this way; but the common sense of men, excited by attention to their rights, and interests, and pleasures, will soon prove an overmatch for such engines of iniquity.

From the prevalent abuses which we have been just now describing, it is much to be regretted that the best intended institutions have degenerated into the worst. Nothing is more current in a free state than discussions concerning the different forms of government, monarchy, aristocracy, democracy, theocracy, or certain limitations and modifications of each of these; or, as in Britain, a mixture of the three former. They may be each of them either good or bad, according to concomitant circumstances. If the banditti which Romulus assembled on the banks of the Tiber, and which he set himself over as a leader, had not been united under him, as so many members under a head, they never would have founded the city of Rome and the empire of the world. Neither would their suc-

cessors,

cessors, for a certain period of time, without the same means of union, Kings, cementing them into a firm, compact, and regular body, have been able to make head against a number of little states around them, older, and therefore better modelled, than themselves. And, after the monarchy degenerated into despotism, and the prince into a tyrant, and they had now become destructive, not a source of health, to the subjected parts; after the several members, when they had been taught by the head each to perform his proper function, by habit and exercise were now rendered fit in their turn to exercise any function of the common system; then it was that they were fully matured to act among themselves for the common good. Hence a republican form of government, which, more early instituted, would have produced the dissolution of the whole body, now became necessary to cement the whole, and invigorate every part. So complete now was the whole system, so enlivened and invigorated through all its parts, that every principal member would act the part of the head, and every head return to that of a member. There was now, while all the parts of the community supported, excited, and corrected every other, no longer any danger, either of despotism on the one hand, or of anarchy on the other.

While

While the body was of moderate size, and compact, and manageable, by this perfect union of its parts, and complete attention of each to the common weal, the republican form was natural and healthy, and *divinely right*. Then consuls and dictators could be ploughmen, and ploughmen consuls and dictators. A little state consisting of a moderate number of individuals, all fired with enthusiasm against despotism, for liberty, and their common and separate rights and privileges, is fostered and enlivened by the republican form of government; monarchy would crush it in the head, aristocracy would extinguish the life of all the several members.

But, after a state becomes to be numerous in its citizens; and the lower ranks of these, in consequence of their number, begin to be obliged to turn their chief attention towards their own support as individuals, and to be proportionally less interested in the common good; ~~for~~ that very reason, they become less qualified than their fellow-citizens, who are more at ease, for taking any considerable share in the public administration. At such a period the more opulent part of the community naturally step into the offices of state, and take the government over the others. In this way only can I perceive, that the States of Holland have degenerated

degenerated from a most simple republic into an uncontrouled aristocracy.

The natural situation of Venice, from the great indigence, credulity, and superstition of the lower ranks of the people, which naturally exclude them from all pretensions to interference in the affairs of government, and from the mutual jealousy of the nobles, leads to aristocracy. The despotism of which form of government, which is great, and detestable to a Briton, would be still greater if this effect were not prevented by an intermediate set of citizens, the poorer nobles: who therefore, excluded from power themselves, and on that account jealous of the rich ones in power, naturally favour the commonalty; and, like friction applied to parts threatened with gangrene, prevent the final extinction of life in the extreme parts of this political system.

Geneva, and a little state or two in Italy, not far even from the state of the church, that seat of hierarchial, and therefore the deepest of, despotism, are secured in a pretty pure republican form from their own insignificancy, and the mutual jealousies of the greater powers surrounding them; each of which, were it not for these circumstances, would swallow them up like so many whales devouring the smaller fishes. But, were these *staticles*, though occupying a small extent

extent of country, to become extensive in their colonization of rich foreign places, formidable in the fleets necessary to support these, and wealthy in consequence of a widely extended commerce, and less cemented in the mass of the people; which, from the necessity of employing many foreign hands in their service, has been the case of the Dutch for two centuries, and was the case of ancient Athens; they would soon, like both, rush with rapidity into aristocracy, and end in a complete subjection to a foreign more powerful monarchy. As Philip king of Macedon terminated the glories of the Athenian republic, in a final subjection to his arms; so, if Britain should be worsted in the present war, will the Burgomasters, and all the other Mynheers, probably become an appendage of the French monarchy, or be divided betwixt it and the empire? Nobody can read the termination of the Peloponnesian war, and the commencement of the Macedonian hostilities against the states of Greece, and that of Athens above all the rest, without the deepest regret. The dissolution of a most beautiful form of commonwealth, first in an aristocracy, that is upon the eve of sacrificing the community to a foreign and natural enemy, in the states of Holland can never be productive of satisfaction to any good and sensible man.

By all the same steps which we have been just

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now tracing, did the illustrious and powerful commonwealth of Rome proceed from that form of government to the most bloody aristocratical, and from the latter to the abyss of despotism.

The first kings of Rome, the present king of Prussia, and Peter the Great of Russia, gave us examples of the indisputable advantages of monarchy, under certain circumstances, when that monarchy is conducted for the good of the whole. England may boast the same thing of a princess, equally arbitrary as those we have mentioned; and her sister-kingdom, now united with her, as well as the most powerful monarchy on the continent, whose invincible armada she under the favour of heaven discomfited, had as much reason to regret it at the time.

The flourishing state of Rome from the expulsion of the house of Tarquin to the end of the second Carthaginian war, and the commencement of the conquest of Greece and of the kingdom of Macedonia; the brilliancy of the Athenian republic, from the expulsion of Pisistratus their last tyrant, till towards the end of the Peloponnesian war; the flourishing state of Holland, after the splendid vindication of their liberty, from their gloomy, cruel, superstitious, bad-hearted, cowardly tyrant, Philip II. while it was fostered by the paternal care and influence, without pretension to authority and jurisdiction,

rifdiction, of the fucceffors of William prince of Orange, who fell a martyr to the vile affaffinating fpirit of the laft-mentioned monarch, for vindicating the rights of his oppreffed country, and propping it with his worth and greatnefs, when it had fcarcely another fupport but its own internal energy ; the freedom of Geneva, diffufed through all ranks of the people ; the perfect happinefs and primitive fimplicity of the little ftate of Lucca ; are fo many instances of the propriety of the republican form of government under the circumftances which admit of it.

We have not time, nor is it to our purpofe, to fettle the queftion, Whether an ariftocratical government under any circumftances is eligible. We may only obferve, that, after the balance of power in Rome had inclined a good deal to the fide of the fenate and a number of their principal members, who had borne and were bearing public offices againft the plebeians, it did tolerably well for a very fhort time ; that the ariftocracy of Holland, fince the ungrateful martyrdom, from the blind rage of an infatuated populace, of their patriotic penfionaries the De Witts, has done pretty well till the commencement of their prefent war againft Britain ; and that the prefent government of Venice, may, for any thing that we know of its interior fprings, be good enough for its flavifh, fpiritlefs, fenfelefs

subjects. It is the end of government to give the governed part all the happiness they can receive, and a little more than the governing part take to themselves. We reject the supposition that any part of mankind have a natural tendency to slavery: But we think it probable, that long habit, example, and precedent, supported by mens ignorance of their own natural rights, and rivetted by an artful superstition contrived to give that idea its fullest power, and further confirmed by natural causes, as the enervating heat of a climate, the want of the exercise of disputing their freedom and independency with brave, active, and ambitious neighbours, and the use of vegetable food, may render any people, under these and similar circumstances, so propense to slavery, so insensible of their rights, importance, and dignity as men, that it might take a hundred years of time, and the highest exertion of as many first heroes as could act in the course of that century, to bring them to any tolerable sense of Roman, Athenian, or British spirit. Further, with respect to the present aristocracy of the Dutch, we think the decline of wisdom in their public deliberations, the noted torpor of the people under their present administration, and the posterity of that people, who once made so brave a struggle for liberty and independence, submitting to private trials, private condemnations,

tions, and private executions, shew them to be in a state approaching so near to the spiritual aristocracy of the inquisition, that we are ready, at least at present, to pronounce, That aristocracy, under no circumstances, is ever a form of government suited to the prosperity and happiness of men. Republics may often, from the unequal discernment of the equal judges, produce unjust sentences, either in excess of rigour or indulgence; and, as the decisions of the Areopagus teach, they may too often err on the side of severity. But the infelicity of the event bringing conviction along with it of the error of its cause, the false judgment, which occasioned it, would from time to time by experience teach any European mob to be wiser for the future; and much more certainly a people instructed by their orators, inspired by their love of their country, enamoured with public and private liberty, impressed with a just sense of the absolute security of their property and lives, and, from every citizen having an equal share in public legislation and jurisdiction, habituated to a justness of decision; advantages which no people in Europe, but themselves, possessed in so eminent a degree, and which none at present possess in any degree at all. In such a mass of legislative authority, there might be more fools than wise men; but as wisdom, wherever it is

placed, though in a considerable minority, is still wisdom, and discernible even to fools as such; in such a form of government as this, it is to be supposed, that it would prove an overmatch to folly, weakened by its dispersion among the multitude. An Alcibiades, from a whim of the people, or from an apprehension that the splendour of his rank, conjoined with his high abilities, could endanger their liberty, might suffer a temporary exile, either from his own wantonness, or their superstition. But the first defeat of their armies or fleets would, from a conviction that it originated from the want of his high abilities, immediately occasion his recall, his being placed again at the head of their fleets and armies, and a remission of the high crime of sacrilege itself, with a compulsion of the Eumolpedi themselves to take off their excommunication. The jars between the patricians and plebeians of Rome, while that city remained upon its genuine republican basis, alarm every reader with terror for the consequence: But, after reading through the full history of this jealousy and animosity, how are they surprised to find, that every such tumult converted internal bustle into external advantage; and every renewal of a quarrel among themselves, produced a renewal of victory over their enemies! The government was well poised. There was

no disproportion of weights in the scales of its balance. It was just like John Bull, upon his own dunghill the city of London, bawling out, with a most vociferous voice, *Wilkes and liberty for ever! The Protestant interest! D—n L—d H—ness! D—n L—d B—! D—n the Scotch! D—n the K—g himself! L—d G—e G—n for ever.* But, after John has got out his breath, which he must have, Wilkes, and Hol—ness, and Bute, and North, are equally forgotten; and the leader of the religious mob is detested in the devastation of the city. Honest John never means ill; commonly only occasions a temporary molestation, which serves but to direct and excite his energy towards material service to the public. When his passion has evaporated, he thinks tolerably well upon the whole; and when he is put in mind of his extravagance in his hot moments, Well, says he, but I did not d—n the Q—n, nor any of her little fine fellows. If you be civil, and don't pretend to compel me; what right have you over a free-born merchant? I'll behave myself as well to you: there is my purse; d—n you, what would you have more? In the same manner, at Rome, all the contentions between the senators and commoners were so many petty jealousies, lest the one order of the state should get the ascendancy over the other. Both equally agreed in the love of public and

private good. It is out of the question to observe, that, amidst the clashing between the honest parts of the community, many knaves interfere, who regard and seek nothing but their own private emolument; which they would not forego for any advantage to the public. This set of men distinguishes no nation; they are in common to all civilized ones; and we take no notice of them, because they have no concern with the point in question. All we meant to say, is, that a republican government, under the circumstances which admit of it, may, under its worst appearances, be not only compatible with public good, but even conducive to this. It is only when the whole mass of the people is corrupted; as they were in Holland when they murdered the De Witts; and as they were in Rome in the civil wars between Marius and Sylla; in the dictatorship of the latter; in the triumvirate of Pompey, Cæsar, and Crassus; in the civil wars that followed the contest between the two first, when the last was out of the way; and lastly, in the triumvirate that followed, and civil bloodshed succeeding to that, which terminated in the conversion of the most illustrious, if not the best republic, into the most vile, gloomy, and abject despotism: It is only in such a general depravation of morality, that republicanism becomes

becomes unfit for the purposes of good government and the welfare of the community.

With respect to monarchy, suppose it in its worst state, that of despotism and tyranny; it is the interest of every monarch or despot, to gain the affection of his people, by promoting their common good. He may be young, he may be weak, he may be wicked; but neither youth, weakness, nor wickedness, are sufficient of themselves to render him the common enemy of his people. After the Roman despotism and tyranny had been screwed up to its height under Nero; after his spirit, inimical to mankind, had gratified itself with as much mischief as mortal authority, commanding a world, could perpetrate; still all this was nothing more than partial desolation. He accelerated his murders, but they were in succession: He wished the Roman people had but one neck, that he might have it in his power to strike it off at one blow; but he could not effect his wish. He burned the city of Rome, to divert himself with a representation of the destruction of Troy; and, the more to enliven his imagination, he played upon his fiddle the *Destruction of Troy*, a tune in fashion at that time. In a word, in inimicality to mankind he outstripped all tyrants of which the page of history has given us any account, and even the tyrants of Rome who either preceded or succeeded him.

But

But what was the amount of his whole mischief? His wish was something more horrid than any thing that we can ascribe to any being well known to us out of hell or Grecian fable. But it was only a wish more horrid than hurtful. His burning the city was partial. His assassinations were confined to his courtiers, and consequently corrupters; and a few citizens, whose opulence placed them within the observation of his informers. Absence from his court, and mediocrity of fortune, placed men out of the reach of his rapacity and cruelty. The empire of Rome was safe upon the whole. Nay, the example he made of every thing eminent around him, prevented his governors from rendering themselves, by extortions from their respective provinces, obnoxious to his rapacity, and thereby ensnaring themselves by the wealth which he might have some appearance of justice in bringing them to an account for. It is a common maxim, *Cum consul gladium eduxerit, quis finem statuit?* When a tyrant begins his ravages, it occurs to the humane reader that there may be no end of them; and that the constitution of human nature may be thrown off its poise by an impotent individual, however great a prince he may be. The worst effects of tyranny have been exposed; its utmost extent surveyed: and yet it has been found only a very partial evil, instead

stead of the general ruin that a humane mind, from its commencement and progress, would naturally apprehend from it. The inquiry has been taken on the largest scale. The emperors of Rome had it in their power, when they were evil-minded, to do more general mischief than any monarchs either before or after them : One has been singled out, whose mischief was the greatest ; and, after all, it will occur to any reader, much conversant in the history of the Roman empire, that the extortions, and consequent distresses produced over the provinces, during the prevalence of the several jundos in power, before the government finally settled in the worst of all governments, despotism, were considerably greater than ever happened, either under this or any other monster of an emperor. Vile, abject, and enslaved in body and mind, as the senate of Rome was at the period we speak of, they had the courage, in spite of his Prætorian guards, upon seeing the conduct of Nero of an unusual evil tendency, and portending a greater magnitude and extent of calamity than they were acquainted with in their limited knowledge of history ; and even to supergrade the effects of the innate malice of a Tiberius, or a Caligula ; to declare him an enemy to mankind, and ordered him to be whipped to death, according to the common account : For it is much

much to be regretted, that the most authentic account of the end of Nero, and some succeeding interesting reigns, are lost to us in the loss of that part of the most judicious Tacitus's history that comprehended them.

After this full exposition of the worst effects of monarchy, our short conclusion upon the whole is, That the hand of a tyrant falls heavy chiefly upon the vile abettors of his tyranny, who immediately surround his throne, and there it can hardly fall wrong; while the equal or greater domination of aristocracy, ransacks every corner over which it has any power. Theocracy of every form and denomination, and displayed under whatever forms of religion or superstition it has hitherto appeared, we industriously pass over, because our acquaintance with the subject intitles us not to intermeddle with so serious a matter. We have said enough, and, many of our readers may think, more than enough, upon the subject of civil government, with a view to what we are next to enter upon, to have a title to the indulgence of our reader for allowance to proceed to that part of our subject.

As no form of government has been shewed to be either good or bad in itself; and, on the contrary, with some doubts about aristocracy, may be either, according as they produce greater or lesser benefit to mankind; by the same rule
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are we to judge of other institutions of lesser magnitude, whether of a public or private nature. These are many and varied. But it belongs not to the purpose of this work to take notice of any of them except one; to which we now proceed.

Universities on their present footing seem not to have existed in ancient times. Among the Greeks and Romans, it does not appear that certain sets of men were authorised by the public to teach the several departments of human knowledge; while others were excluded, or discouraged. Socrates was only a private teacher. The rhetoricians and grammarians were likewise so. Every one who took upon him to teach, delivered what doctrine seemed to him the best of its kind; and his success was always in proportion to his real or apparent merit. Accordingly, some teachers and writers became famous, drew after them great numbers of followers, and at last formed different sects of doctrine. Hence the Pythagorean, the Socratic, the Academic, and Peripatetic schools. The subject of morals was not only treated in speculation, but followed out in practice. The two principal forms it assumed, were, the Stoical and Epicurean. Physic anciently was upon the same footing as other arts; for, excepting the elements of geometry, no part of ancient knowledge seems

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to merit the appellation of *science*, in the sense which the moderns have affixed to it. The principal instructors of youth in this branch of knowledge, from Hippocrates to Galen, were all private teachers. It was only after the revival of letters in Europe, that privileged schools for teaching the several departments of the arts and sciences, began to be instituted; or the former schools of divinity and astrology to be converted into these, with an addition of privileges, immunities, and emoluments. The honour thus bestowed on the seminaries of learning, was reflected upon the several individuals composing them. The students, according to their proficiency in the several branches of erudition which they had cultivated, were honoured with oral eulogies in the common-hall of all the colleges; and received written testimonials, conveying titles of honour and distinction: as, *Bachelor of Arts, Master of Arts, Bachelor and Doctor of Divinity, Law, and Physic*. These titles gave their holders rank and precedence in the community. They were understood to have been conferred for personal merit, and therefore were more honourable in their nature than hereditary distinctions. They had, therefore, a powerful effect, both in drawing many to universities, whose ardour for excellency in knowledge, without such literary premiums, might have subsided,
with

with the finishing of their studies in the ordinary schools ; and all who came to the universities, and had any abilities to distinguish themselves, were inflamed with the keenest desire of attaining the honours which they saw bestowed upon their senior fellow-students. All this had a good effect for some time. Every branch of knowledge then known, and particularly the Greek and Latin languages, with the valuable fund comprehended in them, were studied with ardour. Learning diffused itself over Europe with surprising quickness and rapidity ; and, in little more than a century, the long night of Gothic ignorance was succeeded by a dawn of knowledge, which influenced the greatest part of Europe. The effects of this were of equal magnitude and extent. It affected the political and the ecclesiastical state. The errors of the Roman hierarchy were detected : the belief in the infallibility of the Pope was discussed, and publicly renounced by a respectable part of Europe ; and so extenuated in the rest, as to reduce all that power, which had subjected every monarch to its obedience, within very narrow limits. The Pope, who for two centuries before had established a domination over all the thrones in Europe, and, like Joshua one of the leaders of the Jews from Egypt to Canaan, had set his foot upon the necks of conquered kings,

kings, is now reduced to the necessity of supporting the small remains of his hierarchy upon the feeble prop of public decorum, and the conviction in the European princes of the perfect security which they derive from his insignificance. Europe had hitherto been governed by a barbarous sort of military law, the feudal system. The Roman law now became to be inquired into. The occupation of Europe hitherto had been to live by plunder, and therefore mutual devastation. A commencement of a very different mode of acquiring necessary subsistence, now took place. Merchandize was set on foot. Venice set the example; and property, which had hitherto been measured by the length of the sword, was now judged of by a very different rule, that of justice and equity. The Justinian code was a most excellent system to make the groundwork of all the laws that the different states of Europe could have occasion for either in their incipient or more improved state of civilization. The municipal law became a general study. But this body of Roman law could never be applied to a number of states, as different from the Romans who were governed by it, as complete barbarity, influenced by a species of priests which Rome in her wisdom and vigour never knew; whom she only saw with her eyes wavering in death,

death, and upon whom she only breathed with her last breath, could be from a wise and refined people. The feudal law, therefore, remained as the basis of the jurisprudence established in the different states of Europe. But it received considerable improvement and enlargement from the Justinian code ; which now became a subject of study in the universities.

Theology was also studied in the same schools ; and, from the collision of different opinions upon particular subjects, becoming afterwards a subject of inquiry through life, the great theological points, mentioned above, came at last to be agitated with some acuteness and more zeal ; an occupation among a few individuals, which, from their influence over their respective multitudes, whom they induced to support their new doctrine, terminated in the reformation of religion in Europe.

In the same seminaries of learning, the study of medicine had a place : The Arabic translations of Galen's works were now exchanged for the originals ; to which they had now free access, from the importation of the Greek books and learning, after the taking of Constantinople by the Turks.

Philosophy was also cultivated ; and that of Aristotle was the system adopted. But we have no occasion here to add any thing to what we

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have

have formerly laid upon these two last-mentioned systems. Their demerits have been pointed out, and consequently those of all the universities in Europe which servilely adopt them.

To cut short our remarks upon universities; it will appear, from the slight sketch we have given of their first institution and progress, that, upon the whole, they were at first, and for some time after, productive of good.

But they soon degenerated into so many interested corporations; in which the principal object of pursuit of the several professors was fame or emolument, without regard to the means by which they might obtain these. They meant the doctrines which they delivered, as so many standards of the respective arts or sciences which they taught. And their success in this has at all times been too considerable. One baneful effect of the lessons in universities has been, the acquirement of the knowledge of others, good or bad, and almost a total suspension of exercise of judgment. Hence bigotry in religion, and prejudice in philosophy, have been almost the only result of university labours. Few men ever exercise any judgment of what they are taught: They set out with the presumption that it is true, and every thing they meet with in their progress serves to feed and confirm that presumption. Fewer men think for themselves; and,
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in consequence of that, attempt improvement or discovery. Nay, so little do the bulk of mankind think themselves qualified for making discoveries, that, on the contrary, an uniform opinion prevails among them, that so high a department of the intellectual power is allotted by nature to a few men, whose sublimity of genius carries them far above the common level of mankind. Such is their despair of success in this way, that they think every discovery last made, is the last that ever will be made. All this is a most unfortunate belief. If a right method were followed; if the errors of others were detected, prejudices avoided, the rubbish of false knowledge cleared away, and accurate observation instituted; a great part of mankind would find themselves qualified not only for making improvements, but discoveries. The cause of their failure, and of their confirmed belief in their own inability in that respect, is no fault in themselves, but in their education. The fetters of prejudice with which they were bound in universities, are too strong to be broke off by such feeble exertions of mind and exercise of judgment, as they have been accustomed to. They are in the situation of a traveller, who has industriously been directed into a wrong road, and pursues it because he thinks it the right one; consequently he never attains the place of his

destination. After immense wandering, he finds himself fatigued, and takes up with any place that first occurs to him; thinking the one which was his first destination, too distant for his exhausted powers to come up with. Such students resemble a person travelling from the Upper Egypt to Abyssinia. He has immense tracts of land to pass; and there is but one obscure path, and a certain method of travelling, to get thro' these. He misses that, and therefore concludes that this beautiful country is inaccessible. The application of all this to our subject is plain. It has been the fate of learning, whether from books or lessons in universities, to beget an insuperable bias in the mind towards error, rather than to point out the way to truth. This is the cause of the regretted torpor of the human mind in its inquiries after truth. This is the effect of the sources of error which we have mentioned, and particularly of the modes of teaching in universities. They have had lavishly bestowed upon them the titles of *Seminaries of learning, Almae Matres, The promoters of sound knowledge and good morals*; while, instead of these, they have uniformly merited those of *Seminaries of error, Diræ Matres, Perverters of truth and knowledge*. Was it the Doctors of the Inquisition, whose theology was derived from universities, and conformable with what was taught there; or Galileo,

Galileo, whom they persecuted; to whom we are indebted for the valuable book which we have under the name of this great philosopher? Who gave rules and directions for the investigation of truth in the several departments of science? Was it universities, or my Lord Bacon? Who gave further rules for the department of natural philosophy, and carried them both into execution? Was it universities, or Sir Isaac Newton? Who discovered a proper method of cure of phlogistic diseases? Was it universities, or any university whatever, or any one of the alexipharmac age of physicians? or was it not Dr Sydenham? And, if this celebrated physician carried his new method of cure too far, and applied it to many diseases where it proved a hurtful practice; have physicians had the secondary merit of detecting this erroneous extension of his practice? which they might have had, and remained still as much inferior to him, as the detection of error is a more easy task than the discovery of truth. No: Instead of this, they have subtilized and refined upon this erroneous part of their leader; they have confirmed it, given it the sanction of the authority of their chairs, and done their best to reduce it to rule and system. If phlogistic diseases are, as they have been proved to be*, scarcely in the proportion of one to twenty

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* See Brown's Lectures, and the manuscript part of his text.

of the newly discovered form of disease, the asthenic, either in frequency or fatal tendency; who has had the merit of making a discovery of such essential importance to mankind? was it universities, or who was it*?

If to the extent of morbid affection, an efficacious method of cure has been discovered, and that of local diseases surprisingly improved, and all this confessed to be diametrically opposite to the generally received one, and that of *a certain university*; who are we to thank for the invention of so great a blessing to our species? those who have employed every artifice to procure his ruin, and that of his doctrine; or he whose magnanimity enabled him to face the storm, which his love of truth and ingenuity had brought about his ears? So valuable is this discovery, that scarce a day passes without confirmation of its truth, in the complete cure of a disease that was baffling the present practice. This is a truth that can be authenticated, if ever it should be disputed, and there should therefore be occasion to produce the proofs in support of it.

“ Again, in the customs and institutions of
“ schools, universities, and the like conventions,
“ destined for the seats of learned men, and the
“ promotion of knowledge, all things are found
“ *opposite*

* See El. Med. Brun. p. 126, to 142; and 147, 150, 153, and par. ccciii.

“ opposite to the advancement of the sciences ;
 “ for the *readings* and *exercises* are here so ma-
 “ naged, that it cannot easily come into any one’s
 “ mind to think of things out of the common
 “ road. Or, if here and there one should ven-
 “ ture to use a liberty of judging, he can only
 “ impose the task upon himself, without obtain-
 “ ing assistance from his fellows ; and, if he
 “ could dispense with this, he will find his in-
 “ dustry and resolution a great hindrance to the
 “ raising of his fortune. For, the studies of men
 “ in such places are confined, and pinned down
 “ to the writings of certain authors ; from which
 “ if any man happens to differ, he is presently
 “ reprehended as a disturber and an innovator.
 “ But there is surely a great difference between
 “ *arts* and *civil affairs* ; for the danger is not
 “ the same from *new light* as from *new commotions*.
 “ In civil affairs, it is true, a change for the bet-
 “ ter is suspected, through fear of disturbance ;
 “ because these affairs depend upon authority,
 “ consent, reputation, and opinion, and not upon
 “ demonstration : But arts and sciences should
 “ be like mines, resounding on all sides with
 “ new works and farther progress. And thus
 “ it ought to be, according to right reason ; but
 “ the case, in fact, is quite otherwise. For, the
 “ abovementioned administration and *policy* of
 “ schools, and universities, generally opposes,

“ and greatly prevents the improvement of the
 “ sciences *.

FROM all that we have said, the reader will be at no loss to perceive, that institutions of societies, whether of a public or private nature, upon however good principles they may have at first been formed, are all liable to degeneracy; and, in fact, do all, sooner or later, commonly too soon, degenerate, and frustrate, nay, pervert, their original intention. The good obtained from any of them, from public states to universities, is seldom permanent, seldomer complete. The more common case is, when we trace great services to mankind to their proper sources, that they are chiefly found to originate from the merits of a very few men, very often of one alone. The generalship of Miltiades in the plain of Marathon, where ten thousand Greeks, led on to the field by him, defeated two hundred thousand Persians; the admiralship of Themistocles, in bringing on the battle of Salamis, which terminated in the expulsion of the Persians from Greece, and converted their offensive into a defensive war on their western frontiers; the superiority the Theban state acquired over the rest of Greece, while Epaminondas was at their head, and their subjection to one or other of these, both before and after

* Nov. Org. Scient.

after ; are so many instances of the greater advantages redounding to society from the abilities of an individual, than from all the rest of the state. And, surely, the quarrels of the senate of Carthage, and the ascendant which the faction of his enemies gained over his friends, could not be very favourable towards the victories which Hannibal obtained over the Romans. It is needless to multiply examples ; the achievements of a Cæsar, of a Julian, of a Cromwell, of a Peter the Great, all point to the same conclusion, That for the highest advantages, from which society has reaped benefit, they have been indebted, not to associations of men, but to the superior genius and abilities of a few individuals.

A P P E N

A P P E N D I X.

AS many of the opponents of the new doctrine, are, as far as their knowledge of it enables them, coming about, and imitating the practical part of it, without confessing to whom they are indebted for such an improvement; and as nothing is more probable, than that, in a short time, this practice will be very general: To do justice to my preceptor, to whom I, as well as all his other pupils, think ourselves so highly indebted; and at the same time to prevent any dispute about the author of any part of this discovery; since such is the course of human nature, that first opposition is made to every great discovery, and when it has established itself from its own merit, then a dispute arises whether the discoverer is, or is not, to be deprived of the credit of his discovery: I therefore thought proper to subjoin to the foregoing account of Dr Brown's doctrine, a very few cases, out of the many which might be given; from which the reader may receive a full illustration of whatever we have said, respecting either the hurtful tendency of the present practice, or the salutary effect of the new one.

It

It is proper further to inform the reader, that, towards the latter end of the preceding account of this doctrine, having occasion to bring in some cases in illustration of our subject; I did not complete the view I there entered into, because, upon recollection, I began to perceive that it rather belonged to this place, and would be brought in with more advantage and clearness to the reader at the end of it. I was further interrupted, by being obliged, in the second case of inflammation, or tendency to this, to enter into a vindication of my own character, as well as that of Dr Brown, at great length: In the detail of which, with a view to the exposition of private societies and corporations of men, as often degenerating into a plan of conduct diametrically opposite to the first intention of their institution, I insensibly stumbled upon the subject of government. From that I proceeded to what was more nearly allied with the subject of this inquiry, the consideration of those associations called *universities*. The former discussion was meant to illustrate the latter: And if it has done so, it will now appear not so remote from the general subject, as it might seem at first.

Before the 131st page of this book, the consideration of inflammation, as appearing in different cases of idiopathic disease *, had been started; and

* See above, p. 130, and 131.

and to the extent of two of these cases discussed. The cases which remain, will be resumed in the part of this appendix which we have mentioned.

ALEXANDER HALL, *Æt.* 23.

His stools are to the number of 10 or 12 daily. They are in small quantity at a time, white and slimy, but have never been observed tinged with blood. He complains, however, of pains about the umbilicus, which however are not constant; borborigmi, severe tenesmus, and great sickness, especially when called to stool. These complaints commenced 12 months ago, and since that time have never altogether disappeared; it is only, however, within these 12 weeks that they have become so severe as to prevent his working, and to confine him to bed. He has lately been a patient of the Public Dispensary, and has taken many medicines with but slight alleviation of his complaints. He is at present so weak, that he can hardly stand; and even when he sits erect for some time, he becomes faintish to a great degree: He is very much emaciated.

Cap. hor. som. H. A. c. g^{ss}. xxv.

R. Ol. Ricin. ʒij.

Spir. Sacch. Jamaic. ʒss. M. quatiendo probe.

Cap. semunciam om. hor. donec alv. dejec.

Incip. cras hor. 8^a matutina.

13.

P. 96. Physic has operated well, without gripes. Slept well last night. Let him have butter-milk morning and evening, and rice-milk for dinner.

14.

Diarrhoea has been very severe, with tenesmus and slimy stools. Complains of the butter-milk's being very sour, and of increasing the gripes and purging. Slept ill. Complains of extreme debility, sickness, and faintings.

R. Aq. Cin. ten. fort. aa ʒiss.

Tinct. Lavend. c. ʒij. L. L. g^{ss}. l.

Syr. simp. q. f. ad grat. dulced. Cujus cap. alteram partem statim, alter. hor. som.

Cap. Jul. Siftens. c. 2^{te} L. L. ʒss. 2^{da} quaq. hor. Incip. cras. Hab. Vin. Rub. pur. ʒviii. in die.

15.

Was relieved on getting the first half of his dose; has continued easy ever since; has had four stools since this time yesterday; longs for a bit of more savoury meat than his milk-diet. Let him have a bit of thin beef-stake for dinner. Rep. Jul. Siftens.

16.

Had severe gripes, with much tenesmus and frequent stools. Om^r. Jul. Siftens. Inj^r. ves. enem. ex aq. tepid. ʒbj. Cap. Haust. A. alter. part. statim, alt. hor. som.

Cap.

Cap. Decoct. Cort. Per. ʒiii. 4 in die.

17.

P. 100. Severe gripes and frequent stools to-day. Faeces more copious, and some scybala discharged since the clyster. Was much relieved by his draught yesterday. Rep. Haust. dimidium statim; quod restat, hor. somni. Rep. enem. ex. aq. tepid ʒij. vesp. He complains of much thirst; let him have an orange every day, toast and water for drink, and a little beer for trial.

18.

Easy from the time he took the first draught till this morning; gripes have been pretty severe since that time; great tenesmus; frequent stools, but little discharged. P. at 108. He sweats at present, seemingly with the pain.

R. Aq. Font. ʒij.

Aq. Cin. Ten. ʒij.

Tinct. Lav. Syr. Com. aa. ʒij.

Liq. Laud. gr. c.

M. Cap. ʒij. 3 in die. Incip. statim. Om.

Decoct. Cort. Rep. Vin.

19.

P. as yesterday; very frequent stools, and severe gripes.

Rep. Jul. heri praescript. C. L. L. gr. c. Aug.

Vin. ad ʒij. in die.

20.

Pains relieved; no stool since we saw him yesterday.

yesterday, till 4 in the morning; frequent stools and tenesmus, from that till this; little gripes even then. No tenesmus or diarrhoea since he took the draught in the morning. Slept pretty well in the night, and disposed to sleep through the day, if not disturbed. P. 96. Rep. Jul. ut heri præscript.

21.

Slept tolerably well till within an hour and an half; scarce any gripes; but they begin to threaten now. P. 102. Deafness and tinnitus aurium came on last night when he sat up.

Rep. Julap. Anodyn. statim. Rep. Decoct.

Cort. u. a. præscript. ad 3ij. 3 in die.

22.

Gripes severe; about 20 small thin stools; sleeps but little. P. 108.

R. Aq. Font. 3iv. Cinnam. simp. 3ij. Tinct. Lavend. c. 3ij. Laud. g^{ss}. 180. Syr. simp.

3j. M. f. Julap. cujus cap. 3ij. 4 in die.

Rep. Vin. Omⁿ. reliqua.

23.

Easier of gripes, but weaker; Pul. debil. frequentes, loquela omis. ipse moribund. Omⁿ. med. Cont. vin.

Desired to be dismissed on the 23d at night; he was then carried home, and survived 40 hours after dismissal. Upon the 26th the body was opened, and in the abdomen the glands of the

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mesentery were found in general enlarged and indurated; some of them swelled to the size of a pigeon's egg. Two very considerable constrictions were found in the ileum; at which the internal surface of the gut was ulcerated, and covered with excrescences. The colon was a continued chain of abscesses, so as to form like one mass of ulcerations. In some places the matter had eroded the coats of the intestines; but was prevented from getting into the cavity of the abdomen by firm adhesions to the peritoneum, which thus formed part of the cyst. The adhesions were very universal; and in most places so strong, that on any attempt being made to separate them, the gut gave way. In one or two of the large cysts a considerable quantity of chalky-like matter was found. The rectum seemed to be perfectly sound, as were the kidneys and assistant viscera.

OBSERVATIONS.

THE first inquiry that should always be made when a physician first appears at the bedside of a patient, is, Whether the disease be local or idiopathic*; and, if it should appear the latter, the next question should be, To which of the two general forms of idiopathic disease it belongs. These are distinctions of fundamental importance; the omission of which must lead the practitioner into

* Elem. Med. Brunonis.

into a very random practice. But so little are physicians qualified for making such distinctions, that, in general, they have no adequate idea of the difference betwixt idiopathic and local affections. Of this we have a notable instance in the universal practice of confounding with the proper phlegmasiæ, which are idiopathic affections of the phlogistic form, a number of local ones, called *itides*; all of which, except phrenitis, which is a higher degree of simple synocha, and pleuritis, and sometimes carditis, which are comprehended under peripneumony, are local affections *. They are to be considered as local, or symptomatic of different idiopathic affections, because they all originate from organic affection of a particular part. And, though they are followed by a general tumult of the system, such as is denominated *febrile state*, or *pyrexia*, they are still to be reckoned equally local as if the morbid state did not extend beyond the part first affected. They essentially differ from idiopathic affection, in the following circumstances: First, they arise not from the powers productive of idiopathic affection, which are powers operating upon the living principle of the whole system, and not necessarily affecting the organization of any part, or only affecting it in the progress of the disease: Secondly, they consist in a certain alteration

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* Elem. Med. Brun. cccxx.

tion of the living principle, in an increase or diminution of excitement: Thirdly, they are only to be removed by powers operating upon the whole body, by diminishing or increasing the excitement; whereas local affections arise from powers which have produced lesion of organization in a part, by wounding, eroding, or compressing the vessels. Fourthly, the whole disease consists in the affection of the part when once produced. And, though a more general affection may be diffused over the system, in consequence of the local; it is only, however, a symptom of the local, and not, as in the idiopathic case, originating from the general powers. Fifthly, the cure is effected, by powers which alter not the general state of excitement, but that remove the morbid state of the part first affected. It is further to be observed, that idiopathic diseases, if not too long neglected, are almost always in the power of a judicious physician; while local ones, especially internal, are placed out of the reach of all the means he can employ to restore health. By these marks are the diseases which we have mentioned to be distinguished from each other; and the distinction is of essential consequence. I can cure a peripneumony, by bleeding, purging, abstinence, &c. which are powers operating by diminishing excitement over the whole system, and not in any eminent degree acting

acting upon any part: But I have not the same command of gastritis; which, if it depends upon inflammation arising in consequence of a wound or erosion of a part of the stomach, or from the pressure of a tumour, can only be removed by removing the inflammation, which is the sole cause of all the morbid state that occurs, and it is frequently not in my power to change this original morbid state.

With respect to the present case, we discern a diarrhoea accompanied with the symptoms related: But we know that the whole concurrence of symptoms in this case, may proceed from very different sources. There is an idiopathic diarrhoea arising from debility over the whole system, predominant in the intestinal canal; and to be removed by remedies which invigorate the whole system, and, in consequence of that, the labouring part. At other times, certain local affections, as inflammation, ulceration, and stricture, whatever way produced, are the only cause of the diarrhoea and concomitant symptoms. To this case the indication of cure, applicable to the other, will not apply: In place of which, the only radical cure is to remove the original local affection; which may sometimes be effected by nature, but is always above the physician's art. It is to be feared that our practitioner here has not been duly apprised of the distinctions we have pointed

out : For though it might be difficult to say for certain, whether this case, when it came into his hands, was idiopathic or local ; still it was to be expected that he would make the inquiry ; and if he had done so, he would have found several marks, affording just reasons for the conclusion that the affection was local. The first I shall mention is, the long standing of the disease. From which a natural suspicion arose, that it had something more fixed for its cause, than the mere degree of excitement, which, with or without medical treatment, is so liable to vary within any considerable space of time, and produce proportionable variety in the state of health depending upon it. There is no permanent diathesis. On the contrary, the excitement may not only vary in the course of a year or a month, but of a week, a day, or an hour, according as the exciting powers have been applied in a higher or lower degree. Surely, if one person indulges for a number of days in generous diet, and another totally abstains from it, the same degree of excitement is not to be expected from the latter as from the former. Or, if the same person at different times should indulge and abstain, will not his excitement be proportionally increased or diminished ? The permanency, therefore, of this case for a twelvemonth in one degree or another, but in a very high degree for twelve weeks past, gave

gave just reason to suspect that fixed local affection was the cause of it. Further, if the case had been idiopathic, as it was treated in the Dispensary with all the variety of medicines which could be thought of as promising alleviation or removal of the disease; one of two inferences must be drawn from the cure not being effected, upon the supposition of the disease being idiopathic. One is, that the physicians in the Dispensary did not know the proper method of curing an idiopathic diarrhoea: Or, if it be granted that they treated it properly as such, this other inference is inevitable, That the disease was not idiopathic. It is fair to make some allowance to the Dispensary physicians, for their not having discerned the true nature of the disease at first. For, tho' the long standing of any disease gives just suspicion of its local nature; yet, both in other cases, and in this of diarrhoea, there have occurred instances of disease remaining a considerable space of time upon the general indication of treating idiopathic affection: Which was proof that the disease had been idiopathic through its whole course, and not at all local. When this case, therefore, came into their hands, it was of much less standing than when it was taken up by the clinical practitioner; and afforded proportionally less reason for imputing it to a local cause. And though they had no reason to conclude that it

was for certain local; since they also were not certain of the contrary, they were justifiable for making the only trial which could at once ascertain the true nature of the disease, and give the patient any chance for recovery. By supposing it local, they could do nothing for the patient; but by treating it as idiopathic if it had really proved so, they used the only proper means of restoring the patient's health. This accordingly was done; the disease yielded not, but became more obstinate and violent in proportion to its progress: The last physician, therefore, in the Dispensary who treated it, and who has a competent knowledge of the difference between idiopathic and local affection, finding his remedies, which, if they are such as I have been told they were, were very suitable to the disease as an idiopathic affection, not followed with the usual success in that and similar cases, very judiciously concluded from that very circumstance, that the affection was local, and therefore irremediable; and accordingly dismissed his patient.

After so just an estimation of the nature of the disease, is it not highly probable, that rashness, and ignorance of morbid phenomena, and, a natural consequence of these, the vanity of making a cure where another had failed, were the only reasons that can be adduced for the clinical practitioner's selecting this patient, and persisting in har-

harrassing him with a variety of remedies and drugs, that evidently appeared not only useless but hurtful, till near the very hour of his death? Idiopathic diarrhoea, as we have defined it, if it still remains idiopathic, and has not, as may be the case from neglect or maltreatment, produced incurable local affection, or degenerated into it, admits of a very manageable and successful plan of cure. The indication of cure is, simply, to increase excitement over the whole system; and therefore in the alimentary canal, the affection of which is the only part, and a small one, of the general affection subsisting in the whole system. In executing this indication, the only thing next to be considered is the degree of debility producing the cause, in order that a proportional degree of exciting or stimulant power may be applied for the cure. In such cases of disease depending upon debility, when the appetite is lost the debility is understood to be very considerable; and there is no access to the only durable and radical remedy, that is, the stimulant operation of generous diet, and drink, and exercise, suited to the strength. In order, therefore, to enable the system to bear these remedies, and receive the full advantage of them, recourse must first of all be had to certain powers which are stimulant in a higher degree, but with less duration. These are, strong drink, vinous or spiritous, more or

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els, or not at all, diluted, according to the exigency of the case; opium, musk, camphire, æther, and electricity. They are to be used, therefore, in succession or conjunction, and repeated and varied so, as that the excitement is never allowed to sink; and lastly, gradually diminished, till the debility is so far got the better of, that the appetite for food, and the power of digesting it, are restored. While these are imperfectly restored, some degree of the other stimulants, which we distinguish by the name of *diffusible*, ought still to be administered, to compensate for the deficient stimulus arising from the alimentary matter. But when they are perfectly restored, it is then that there will be no farther occasion for the use of the diffusible stimuli, than to allow a few glasses of generous drink after the principal meals, and to avoid over indulgence in vegetable matter, and every thing that is acid or acedent, or liable to excite a fermentation in the alimentary canal. The principal article, therefore, of food, should be animal matter, and especially flesh, in all their varied forms and preparations; only guarding against such of that kind of matter as is hardened, and somewhat corrupted, from its own nature or preparation. It will be understood, that, in this as well as every other case of debility, due regard must be had to the stimulus of air, and a certain stimulus arising from

a proper management of the mind and passions. This indication and plan of cure, while it is adequate to the removal of idiopathic diarrhoea, increased or diminished according to the degree of diminution of excitement constituting each case, applies to every case of idiopathic debility, to every asthenic disease whatever.

There is a farrago of drugs and remedies prescribed in this case, that have neither any common operation among themselves, nor correspond to any simple indication of cure. The haustus anodynus, which is first prescribed, is a high diffusible stimulant; and, were the diarrhoea idiopathic, if given in sufficient quantity, is a very proper indication. But the objection to it here is, that the disease is neither idiopathic; nor would the remedy be of any effect, though it were so, upon occasion of the smallness of the dose. The same thing is to be said of the small quantity of rum conjoined with the ol. ricini in the purgative prescription; where the quantity of rum is too insignificant to operate with stimulant effect to be serviceable in the affection as idiopathic, and the castor oil would have answered better for the local affection if it wanted its purgative quality.

In short, as we said upon a former occasion, the intention of the physician, who excites purging to cure purging, is incomprehensible upon

upon any rational principle, and hardly consistent with the random practice of empiricism. There is only one purgative known, for the giving of which in looseness of the belly some apology might be made. It is rhubarb; which, though it produces purging, is commonly supposed to brace the intestinal canal, and obviate purging in the end by its tonic quality. It may have some such effect; but in so far as it purges at all, it is improper; and its tonic effect can be much better, and sooner, obtained from remedies possessing a higher degree of stimulus.

In the report of next day, we are told, that the patient slept well, and had no gripes in the course of the night, and that the physic operated well. But the observation here is, that the physic would have operated better if it had not operated at all: and the sleep that ensued might be the effect of some circumstances which are not taken notice of; but it could hardly be the effect of the remedies. I suppose the patient had no gripes, because, being asleep, he was insensible of them. It is impossible to conceive the intention of our practitioner in prescribing the next articles; which are, butter-milk and rice-milk morning and evening. If his practice was empirical, I would ask him for a single instance of butter-milk having been of any use in any morbid affection of any kind, whether idiopathic or local;

local; unless to answer the purpose of a cooling drink, to such persons as had a craving for it, and agreed with it; and in certain cases of phlogistic disease, in which every degree of stimulant or active operation was contraindicated. Again, upon any rational principle, I would ask our clinical practitioner, What kind of operation he expected from his butter-milk? He surely could not expect a stimulant one from it, if he meant to treat an idiopathic diarrhoea; and any effect of it upon an immoveable local affection could only be expected from its acting as a charm. His practice, therefore, with it may be charming; but it is neither rational, nor countenanced by empirical analogy. To persons who know something of the nature of the human body, and of the operation of the several powers acting upon it, either as remote causes, or remedies of disease, the event of the operation of this substance could not be ambiguous, upon the supposition of this diarrhoea being either idiopathic or local. It would increase the former, as a debilitating fermenting power; and it could only be of service in the latter by acting as a bland demulcent substance, which are properties contrary to those it possesses. If it was given to alleviate thirst, cold water was much better suited to answer that purpose. In a word, by its tendency to fermentation in the intestines, instead of its
alleviating

alleviating the symptoms, it was well suited to increase them all, whether as depending upon an idiopathic or local cause. And that it did so, we have direct proof in the next report. Hear the report. "The diarrhæa has been very severe, with tenesmus and slimy stools. He complained of the butter-milk's being very sour, and of increasing the gripes and purging. He slept ill, and complains of debility, sickness, and faintings." These were the palpable effects of the butter-milk. They originated from its acting as a debilitating and fermenting power. And the only other article, alimentary or medicinal, conjoined with this, the rice-milk, possesses no such eminent degree of stimulus as to be suited in any degree to counteract such hurtful tendency.

To obviate such evil consequences, in the next article, we find 50 drops of laudanum, supported by 2 drachms of tincture of lavender, prescribed to be taken in two dozes, the one immediately, and the other at bed-time. This article is supported by another, to be taken the day following, which is the julapium fistens, supported by eight ounces of wine, taken thro' the course of the day. All this is very right. But why set matters wrong to put them right again? Is it not the business of a physician to do his best to remove any morbid affection at the time present?

sent in the constitution? If so, it will follow, that it is not his business to increase the disease one day, and the next remove the mischief which he himself has occasioned. Such a practice may prove, that the physician is capable of doing mischief one day, and of removing the mischief of his own creation the next; but it does not amount to the final purpose of gaining upon the disease, by doing every hour something towards its removal, and supporting and improving that by a steady perseverance in the use of every thing proper. As there is no permanent diathesis in human nature, as idiopathic disease constantly depends upon an increase or diminution of excitement; so there is never any time to be lost, in either * doing nothing, or sporting with useless and pernicious prescriptions, because the effect of these may be undone afterwards by contrary ones. The physician ought constantly to go on increasing excitement where it is deficient, or diminishing it where it is increased. The supposition of a *vis medicatrix* is contrary to truth; and therefore must not any confidence be placed in it. Depending upon the *vis medicatrix* can be proved to be pernicious wherever the increase or diminution of excitement might have produced a cure.

The laudanum and wine, prescribed with the intention

* Elem. Med. Brunonis. xciii.

intention taken notice of, require a further observation. As the chief use of them is to raise the excitement to that degree which is consistent with the return of appetite; so, whenever that end is attained, there is no further demand for the laudanum, and only a demand for as much of the wine as may be still proper to support the stimulus of food, such a quantity as is commonly made use of as alimentary. This applies to cases of considerable debility. But, in the present state of this case, notwithstanding of the evident increase of debility from the effect of the buttermilk, and from the intermission of more stimulant aliment, we find some appetite still subsisting, and the patient "longing for a bit of more "favoury meat than his milk-diet." Accordingly it is graciously condescended, that he "may "have a bit of thin beef-steak for dinner," with a repetition of his julap. fistens. The physician should have found out this to be necessary, and should not have needed the hint which the patient's craving suggested. One of the errors of physicians is, that when they hit upon a proper remedy, they miss the benefit that might be derived from it, either by under-dosing it, or not supporting it by repetition of doses and the use of other stimuli. Had this case been idiopathic, the diffusible stimulus here administered would have been insufficient for giving the degree of excitement

excitement which health required, both from the smallness of its quantity, and its not being supported by proper alimentary stimulus. Nay, had this last been employed in the quantity that the patient, from his craving, seemed capable of taking in, the quantity of the diffusible stimulus here prescribed, or even less, might have sufficed for the effect intended. But this false idea impresses the generality of physicians, dogmatic as well as empiric, that it is always one thing, not one operation in common to many things, that proves the remedy of diseases *. They are all empirics at bottom, in so far as the leading idea of dogmatists, as well as empirics, is, that every remedy of disease, supposed a real one, possesses something that fits it for the cure of some particular affection, different from the operation of every other. This is to all intents and purposes the doctrine of specific virtue held forth in its full extent. It is a most unphilosophical notion, and contrary to what we can even prove to be the truth. For, with respect to other bodies or powers in nature, the knowledge, that we have of the similarity in the operation of a few of them, creates a high probability that the same similarity extends over more, or perhaps the whole. But, with respect to the powers operating upon the human body, in a work lately offered

* See the Chapter on *Analysis*, &c.

offered to the public *, and which has not been, and in all probability never will be, answered, it has been demonstrated, that they produce the whole phænomena of health, or bias to disease, and of actual idiopathic disease in both its general forms. So little room is there for the supposition, that the remedies of idiopathic affections or proper diseases, for them only we call proper diseases, are different in their kind of operation from each other. Till the proposition which we have now quoted be admitted, and the false idea which we have refuted, rejected, there will no end of blundering both in the pathology and practice of physic. No cure will ever be made but by mere hap-hazard. But, as the whole must be random shooting in the dark, the only thing that can be certain *à priori* is, that the object of intention has all the possible chances of being missed. Physicians talk of many incurable diseases; and they call them the reproaches of their profession. But they are much more so than they know of. They are the result of the grossest ignorance and the vilest prejudice. This is not the place to enumerate the examples. We hope to have a convenient opportunity for that afterwards. In the mean time, the digression we have made serves well for an illustration of what led us into it. The diffusible stimuli of which we were speaking

* Elem. Med. Brunonis.

ing are highly proper, in cases of great debility, to raise the strength to that degree which enables the patient to bear the more durable, the alimentary, and receive the benefit which they naturally bestow. But when that is done, their use is no longer necessary. Then it is the permanent stimulus of alimentary matter and exercise, that can only keep up the vigour in the due degree which health requires. To apply this directly to the present case, supposing it idiopathic, as the patient had appetite, it was absurd to shuffle him off with butter and rice milk. The diet required was the most nourishing, stimulant, and easily digestible animal matter, both in a fluid and solid form. If his appetite did not permit him to take in a sufficient quantity; by that it was to be understood, that his excitement was still too low, and that there was still a considerable degree of debility to be overcome. To answer which purpose, the diffusible stimuli were still to be administered in such a proportion, as to compensate for the defect of the alimentary and more durable.

We have next an injection of tepid water, and the anodyne draught continued. Which last is proposed to be supported by 3 ounces of decoct. of Peruvian bark, given four times a-day. The draught and the clyster are continued next day. The draught both times gave a temporary relief.

O

Next

Next day it is varied, by the addition of small cinnamon-water and spirit of lavender. In this the quantity of laudanum does not much exceed what was given hitherto; but its effect is supported somewhat by the addition of the other two articles, and by being repeated thrice a-day. Wine is now also prescribed. This still had no effect. Next day the laudanum is increased to 150 drops, and the wine to 2 lb. through the day; the quantity of the diffusible spirit being now raised, so as to come nearer to that in which the dose can only prove effectual. We accordingly find the patient relieved while the influence of the medicine remains in his habit. This relief, however, proved only of short duration, and the medicine soon lost its effect; which would have been the case though the disease had been idiopathic. The effect of the diffusible stimuli is very transitory, and can only be kept up by a frequent repetition of it. The giving the whole draught at two vices shewed the practitioner was not aware of this fact; and he committed an essential blunder in not supporting it by alimentary stimulus. Accordingly, though the draught is considerably increased in the next dose, it lost effect altogether, and the symptoms of death came on. The patient was opened, and the greatest part of the intestinal canal was found to constitute one mass of ulceration. All this might have

have been foreseen from the long standing of the disease, and from its obstinately resisting every method of treatment that could be thought of in the Dispensary. The physician there had judiciously perceived that. It was therefore very injudicious in the other practitioner to take it up. If it could be alleged in his defence, that he doubted of the propriety of the plan of cure in the Dispensary, he had no more to do, to obtain conviction, but to make trial of the idiopathic plan of cure, not piecemeal and by halves, but completely at once. And if the disease yielded not to it, then he might have been morally certain that it was a local affection. For want of that judgment, he tormented a poor dying creature for a number of days, and gave himself a great deal of very useless trouble. The error we have censured in this case is not confined to it, nor peculiar to this practitioner. We are sorry to say it is too general; and that very few physicians have any adequate notion of idiopathic and local affection, or ever think of distinguishing them: Without which, however, their practice must be altogether a random, desultory one, and often hurtful and pernicious.

JAMES YOUNG, *Æt.* 50.*April* 23. 1781.

Is obliged to go to stool 3 or 4 times every day. His stools are in small quantity at a time, considerably slimy; but have never been observed mixed with blood. He has no tenesmus; and though he complains of pain of his belly about the umbilicus, it is neither constant nor very severe. He complains at the same time of a very disagreeably bitter taste in his mouth, which obliges him to spit very frequently. Tongue foul; great thirst; pulse 100; little appetite. He is considerably emaciated, and much weaker than formerly. His spirits are also much dejected; he is, however, naturally of a melancholic frame of mind. The looseness is of seven weeks standing; and he imputes it to his having put on wet cloaths. The thirst commenced about three weeks since; from which time he thinks he has passed about six pounds of urine. The urine is pale and limpid, and has nothing particular in its taste.

Utatr. Garg. emoll.

Bibat Infus. Lini ad libit. Hab. Haust. A. nod. hor. som. cum g^{tt}. xxv. Laud. L.R. Elect. lenit. Cryst. Tart. aa ʒi. Syr. sim. q. s.
Cap.

Cap. coch. mag. cumulat. 2^{da} q. hor. donec
alv. dejec. Incip^t. cras mane.

24.

P. 96. Slept well; phyfic has operated three
times; no extraordinary quantity or appearance
of urine. Complains much of weakness and
bitter taste in his mouth still. Throat sore. *Ipsē
fere fatuus.*

Repet^r Garg. emoll. & Hauſt. An. hor. ſ. et
Infuſ. Lini ad libit. Bib^t, Potion, Cretac.
3iv. 4^r. in die. Incip^t. cras.

Let him have an orange.

25.

Pulſe above 100, and feeble. No ſtool ſince laſt
night, and little gripes; ſlept well; thirſt abated.

Repet^r. Med. et hab^t. Aq. Card. 3xij. in die.

26.

Three ſtools laſt night, and ſome threatening
of a return of diarrhoea at preſent; pulſe fre-
quent and feeble; ſkin dry; bad taſte in his
mouth; urine natural.

Cap^t. Pulv. Dov. ʒi. partitis vicibus interval.
2 hor. Incip^t. hor. 6. Induat induſium la-
nium. Fov^r, crura per hor. 1. Bib^t, inter
ſudand. Decoct. Avenar. et Infuſ. Lini ad
libit. Repet^r. Aq. Cardiac. Omitt^r. reliqua.

Did not take the P. Dover.

He died at 7 p. m.

THIS

THIS is a case of universal debility ; which the symptoms of diminished appetite, dejection of spirit, and the melancholic habit of the patient, sufficiently evince. Nor is there any reason for doubting that the loose belly depends upon the same cause ; since there is not the least appearance of local affection in any part of the intestinal canal. “ There was no blood in the fæces, “ no tenesmus ; and though the patient complained of pain in his belly about the umbilicus, it “ was neither constant nor very severe.” On the contrary, over the whole alimentary canal, as far as any notice is taken of it, there are evident signs of a prevalence of the same debility, which is discernible in the system in general. Of this import are the sliminess of the stools, their frequency, the foulness of the tongue, thirst, and diminution of appetite. The frequency of the pulse, as far as it can be judged of from that single circumstance, is not inconsistent with the conclusion we have drawn ; especially when it is considered, that the temperament of the patient was melancholic ; which is a temperament distinguishable, among other signs, by a considerable slowness of the pulse. Indeed, the account given of the pulse is essentially deficient, as no mention is made of its strength, size, and fulness. Which are marks that, upon every occasion, it is as necessary to take notice of as the frequency,

But,

But, since all the rest of the concurrence of symptoms denotes evident debility, we are thence sufficiently warranted to supply the circumstances so injudiciously omitted ; and to conclude, that, besides the frequency, there was also a weakness and smallness of the pulse. And indeed, besides the last mentioned argument, it is impossible to conceive any excess of strength and vigour in the heart and arteries, concurring with the state of unquestionable debility prevailing in the rest of the system. We conclude therefore, upon the whole, from the state of the pulse, as well as all the other symptoms, that this is an idiopathic asthenic affection, or disease depending upon diminution of vigour over the whole system, particularly predominant in the alimentary canal. Further light would have been thrown upon the nature of the disease, and additional confirmation brought of our conclusion respecting that, if a full account had been given of the remote causes ; as there is no surer means of judging of the nature of any disease, than by taking as complete a view as possible of the powers which produced it. But here, instead of that, no mention is made of any thing leading to this disease, except the patient's having put on wet cloaths. For though a hint is given of his temperament, which is said to be melancholic, that is done, not with the intention of pointing out any thing

additional, respecting the remote cause, but to shew, that the dejection of spirit is not to be solely imputed to the present morbid influence, but in a great measure to the usual habit of the patient's mind. Accordingly, no use is made of it in the plan of cure. The defects which have been pointed out in the history of this case are not peculiar to it; nor is our present historian the only one chargeable with such culpable omission. It is too general, if not universal, among physicians. And the morbid registers in the Royal Infirmary of Edinburgh afford as many proofs of it as they contain particular cases of disease. Every idiopathic affection is preceded and ushered in by a state of predisposition, of longer or shorter duration. This is commonly altogether overlooked, or so superficially handled, that no advantage in judging of the nature of the disease, or forming the indication of cure, is almost ever derived from it. They talk indeed of predisponent and occasional causes; but in such a manner as to give conviction of their ignorance of predisposition, and of the operation of every power productive of disease. Their surprise and astonishment at a proposition lately laid down, which is, That predisposition is precisely the same with morbid state, affords irrefragable proof of this; yet nothing is more true*.

This

* Vid. Elem. Med. Brun. xxvii. to xxxiii.

This capital error is clearly illustrated in the present, as well as in every, case taken from the same repository. This patient is 50 years old; a circumstance of considerable importance, since it implies a considerable abatement of vigour. The meridian of life is past with him; and proportional debility*, in so far as that circumstance goes, must be the consequence. He is of a melancholic temperament; which implies a considerable degree of predisposition to morbid debility. But neither is any use made of that. These two circumstances are mentioned as words of course, and because it is customary to introduce certain mystical distinctions betwixt the latter and another temperament called *sanguine*.

No inference is made from them in forming an idea of the nature of the disease; whereas, if physicians made the proper use of these and other such general phænomena, pointing out a state of the body pre-existent to that of actual disease, and at the same time differing from it only in degree, there would be few occasions, on which they could mistake the nature of the latter.

OBSERVATIONS ON THE CURE.

THE first remark that occurs here is, That when the operation of the remedies here employed is considered, it does not appear that the physician

* Elem. Med. Brun. lxi. to lxx.

physician had the smallest idea of the real nature of the disease. Twenty-five drops of laudanum are indeed prescribed the 1st, 2d, and 3d days, and the insignificant stimulus of 12 ounces of aq. cardiaca on the 4th and last day. But these remedies, from the small quantity of both, and weak quality of the latter, could not have the least influence in removing a state of universal debility. Nor does the use of such trifling stimulants warrant any person to conclude, that the practitioner who employed them could have any view of removing that kind of morbid state.

We next observe the infus. lini administered through the whole course of the disease, excepting on the second day. This was no doubt intended to increase the quantity of urine. But I would here ask the practitioner, supposing the quantity of urine increased to a certain degree, if he would flatter himself that he had for certain relieved that symptom, and whether he would not make any allowance for the linseed-tea constituting itself a part of the increased evacuation? In the present case, the next day after the prescription, we are told the urine is not increased; and though the prescription was continued during the subsequent days, no mention, however, is made of its effect. We must therefore suppose it had none, in the opinion of the physician; but, in our opinion, that it had a bad one; since,

Since, though an additional fluid was thrown into the habit, and, from its known tendency to pass to the urinary vessels, undoubtedly made a part of that excretion; yet the excretion, as arising from the ordinary source, with the addition from this new source, was diminished, or at best remained the same as before. There can be therefore no doubt, that the quantity of urine, as proceeding from its ordinary source in the habit, was in this case greatly diminished, by a remedy intended to increase it.

Another remark occurring under the same head is the following. If diminution of urine in this case, as in dropsy, depended upon a state of debility, what power could linseed-tea be supposed to have in removing such debility? The inconsistency and self-contradiction prevailing in the theories of many physicians is astonishing, and such as is not to be equalled by any other set of abusers of human reason.—An opinion, that long prevailed in the profession, and that was a very natural one, was, that taking in an extraordinary quantity of water was a powerful remote cause of dropsy. This opinion has of late been forgotten; and in the place of it, the prevailing one at present is, That drinking water, or any watery fluid, increases the quantity of urine, and therefore diminishes the cause of dropsy. Our practitioner's prescription of linseed-tea
seems

seems to proceed upon that principle. We have pointed out the error of his idea. And we have further observed, with respect to either the case before us, or dropsy, that it is not water that is suited to remove either the cause of the disease, or any symptom depending upon it. On the contrary, the only indication of cure in both these, and every other case of idiopathic debility*, is to invigorate the system by all the powers suited to that effect: But linseed-tea and water are none of these.

We have not the least objection to the use of the emollient gargle. But we are again afraid, that our practitioner once more betrays his ignorance of the cause of this symptom, which he means to remove by this remedy. At first sight we can discern, that the remedy had no effect; for the bitterness in the mouth remained till the patient's final dissolution. This is another instance of the common blunder of practitioners in considering the several symptoms of any morbid case as so many different diseases, and adopting a correspondent variety of remedies in order to remove them. The taste of the mouth here proceeds from a diminution of the excretion over the palate and fauces, in consequence of debility of the heart and arteries. Its radical cure is that of every one of the symptoms, viz. to remove debility

* Brown's Lectures.

debility, predominant over the whole system, and therefore in the heart and arteries. Till this effect takes place, there can be no harm in the use of a proper gargle. But we regret, that a mistake should have subsisted so long, and been so generally received in physic, that supposes gargles and other similar applications to parts, a radical means of cure.

As one of the principal symptoms of this case is frequent preternatural purging, we confess ourselves utterly at a loss to comprehend, upon what principles a purge should be employed as a remedy of purging. But, to exhibit a view unknown to our practitioner, and to too many of his fraternity, we can assert, that by whatever means purging is induced, in whatever way the first part of its operation proceeds, it is among the few powers that operate upon the human body by a high degree of debility. It is by such an operation that Dr Sydenham and every intelligent physician have found it so effectual in removing phlogistic diseases. Upon the same principle I can explain the remarkable tendency of even moderate purging in bringing on a fit of the gout. And, from repeated proofs of the successful operation of the most stimulant powers that can be applied to the human body in proper fevers, we have the most certain confirmation, that every part of the common method of cure,
which

which consists in bleeding, evacuation of every kind, and inanition, is of directly pernicious tendency; and that, by debilitating the system, already under the influence of excessive debility. Purging, therefore, which has its ample share in this destructive debilitating process, must, from that demonstrable effect of it, be concluded a highly debilitating power. To the arguments adduced in proof of the debilitating effect of purging, and to many more which could be adduced, we add one, arising from the effect of purging in the present case, where the debility of the whole system is manifestly and alarmingly increased. Take the words of the report. "Slept well; physic has operated three times; "but no extraordinary quantity or appearance "of urine. Complains much of weakness, and "bitter taste in his mouth still; *and now* his "throat is sore, *ipse fere fatuus*." These are all symptoms of a high increase of debility. And, instead of repetition of the remedies we have been speaking of, with the substitution of an insignificant article in place of the purge, they require to be treated by remedies of the highest degree of stimulating and invigorating operation. On the third day we find the debility still increasing, in the additional circumstance of feebleness of the pulse. For which provision is made by

the

the addition of aq. card. ℥xij. to the remedies last prescribed.

We are now come to the last part of the scene, or rather the last scene of this tragical act. In proof of the insignificance which we mentioned before, of the trifling dose of laudanum, and of the cordial water, the disease now attains to the height of its debilitating career. The purging returns; the pulse is frequent and feeble; the skin dry; the bad taste remains. When we consider the rise and progress of this disease, and the causes assigned for its appearance, we are puzzled to the last degree to find an adequate cause for this rapid progress of debility, so unexpectedly terminating in death. Upon such an occasion, we do not however think ourselves reduced to the necessity of chiming in with the common observation, That death will baffle the best efforts of the physician: For, though that is often certainly true, it is oftener falsely applied, and laid hold of as an apology for the physician's evident misconduct.

The *petitio principii* of the medical profession, when their patients recover by any means whatever, is, That it is from their judicious treatment; when they die, That it is owing to the insuperable force of the disease, and the incurable failure of nature. We pretend, however, to hold a very different opinion upon

too

too many occasions, both of recovery and death, as occurring upon the common practice of the profession; and we contend, that there is not the least cause of wonder in the so frequent fatality of that practice. On the contrary, the only wonder is, that any ever escape it.

To conclude our remarks upon this case: We can discern nothing in the powers alleged to have induced this disease, or in the habit of the patient's body, sufficient to account for its unexpected and fatal period. But we can with clearness perceive, that, with the exception of two articles rendered insignificant by the smallness of the dose, the whole method of treatment here was not only improper and hurtful, but diametrically opposite to the only salutary one, and that it might be an adequate cause of death. The disease consisted in debility of the whole system, particularly in the alimentary canal; consequently the indication of cure was to remove that debility, and raise the powers of nature to the degree in which health consists*. The remedies corresponding to that view are the most highly stimulating and invigorating, such as opium, wine, the most bland and nutrient alimentary matter, first in a fluid, and afterwards in a solid form; and, in the convalescent state, gentle exercise suited to the strength, and supported by a

* Elem. Med. Brunon. lxxxv.

short course of the Peruvian bark. Lastly, to prevent any return of the disease, a full nourishing diet, supported by the moderate use of generous drink after meals, with a proper management of temperature, and keeping the patient cheerful, with moderate though varied exercise of his mind, was the plan to be pursued.

BERNARD STEWART, *Æt.* 28.

April 6.

UPON the 3d instant, after returning from his exercise, found himself attacked with languor and lassitude; great headach and pains over his body, and great nausea, and some vomiting. That night he complained much of thirst, heat, and great restlessness. These complaints have continued ever since. His pulse is 96. Tongue dry and foul; appetite gone. He had an emetic on the 5th, which both vomited and purged violently. The diarrhoea has continued since. His sleep has been much disturbed; he has constantly wakened with a start.

Cap. P. C. Peruv. ʒj. 3^{ra} quaque hora ex vin. mixto.

Hab. Vin. Rub. *ibi*. Aq. font. *ibis*.

Hab. H. An. c. gr. xxv.

7.

Pulse to-day 84. Tongue clean and moist;

P

has

has thrown up every dose of bark he has taken, even when he took but ʒss. Threw up bitter stuff, and has a bad taste in his mouth. Slept ill; uneasy dreams; skin hot and dry.

Cap. Sol. Antim. ʒss. om. $\frac{1}{2}$ hor. ad vomit. usque. Incip. statim. Om^r. Cortex. Rep^r. Vin. & fatus, & H. A.

8.

Solution operated well both ways. Pulse today under 90. Tongue moist and clean; skin dry; heat moderate. Frequent nausea and vomiting on taking any thing into his stomach; but he retained his breakfast.

Cap. 3^{tes} quaq. hora Haust. Salin. inter effervescend. Rep^r. Vin. mixtur. Bib^r. frigidum ad libit.

9.

Pulse about 84. Tongue clean and moist. Countenance and voice natural. Frequent severe bilious vomiting; vomiting on taking any thing into his stomach, even the saline draught.

Cap. statim Pil. ex Op. puri gr. iß. & post $\frac{1}{2}$ hor. cap. ʒiv. Solut. sequent.

R. Sal. Glaub. ʒi. Cryf. Tart. ʒss. Solv. ex Aq. bull. ʒxv. & adde Aq. Cim. ten. ʒi. Rep^r. Solut. ad ʒiv. 2^{tes} quaq. hora donec alv. dejec.

10.

Pulse 84, and weak; vomiting scarce checked by

by the pill. He threw up a little of each dose of his salts; but retained enough to purge him frequently through the night. Vomiting stopt for about 13 hours after taking a pill ex Op. Pur. gr. i. Pil. à Cicut. gr. iv. Has thrown up the saline draught and wine every time they have been given him to-day; vomiting still bilious.

Cap. hor. 4^{ta} Vin. Ipec. ʒi. & bib^t. Inf. Flor. Cham.

Cap. hor. som. Pil. ut her. præscript. ex Cicut. et Opio. Om^t. Hauſt. Salin. Rep^t. Vin. pur. ad ſbi. in die.

11.

No more vomiting ſince laſt night; great and almoſt conſtant drowſineſs. Stools paſs'd inſenſibly in bed. Great confuſion and debility. Pulse 96; ſoft and feeble.

Abrad^t. Capil. Bibat 2^{da} quaq. hora Vin. pur. rub. ʒiv.

12.

While his head was ſhaving, had ſome threatening of convulſion; after which, however, he ſlept very well till 4 a. m. when he awakened, and was ſuddenly ſeized with an epileptic fit, of which he died in a few minutes.

OBSERVATIONS.

WE have a caſe before us of a ſimple and gentle typhus. All the ſymptoms here enumerated are

such as indicate evident debility. These are, Languor, lassitude, permanent want of appetite, nausea, and some vomiting. And the effect of an emetic proving violent in exciting both vomiting and purging, and leaving an obstinate diarrhoea behind it, is a circumstance of the same import. There are not more debilitating powers in nature, whether induced by art, or the result of disease: And it has been peculiarly unfortunate for mankind, that physicians have made constant and large use of them as remedies in diseases of evident, and often great, debility. Nay, such has been the intemperate use of these remedies, that while in general they have been little depended upon, or altogether rejected, in the only set of diseases in which they could be of real service, the several phlogistic diseases, one would be tempted to think that physicians have administered these most debilitating of all powers in exact proportion to the degree of debility that constituted the morbid state. The great head-ach and pains over the patient's body, thirst, heat, and great restlessness, are, equally as the others, the result of a prevalence of debility*. But, it has been extremely unlucky for the profession, that physicians have considered them as the effect of too great activity in the system, acting as a morbid cause. And, setting out with that fundamental

* Brown's Lectures.

mentally erroneous idea, they have been very generally misled to a most pernicious indication of cure, and a most destructive selection of remedies. In both which respects, the falsity of their judgment can be satisfactorily refuted by the following facts. First, no powers can in any case be discerned to have preceded proper fever, but such as are evidently, and commonly highly, debilitating. Secondly, if physicians will admit, what they dare not deny, that any symptoms of debility occur in such morbid cases, we can prove, that the very same powers which produce these, also produce all the other symptoms, of whatever import they suppose them to be. Consequently the supposed symptoms of activity, or morbid increased action, are referable to no other source. Thirdly, it has been proved of late by innumerable trials, that no powers but stimulant ones, and these of the most stimulating nature, and which are known at all times to possess the power of raising the system to its most excited state, are suited to remove the morbid cause, and that they are most completely adequate to that effect. The incredible success of this new plan of cure in proper fevers, and in all other modifications of asthenic disease, places the last argument above all possibility of entertaining the slightest doubt of its validity. But, while the arguments adduced are sufficient to

warrant our conclusion, we have yet another ; which, although a negative one, adds great weight to the evidence arising from the other three. It is this. The ill success, or rather fatality, of fevers at all times, but especially since the practice of physic took a contrary bent to the alexipharmac practice, and still more especially at this present time, in which the pernicious debilitating plan of cure in fevers and other asthenic affections has been wrought up to all the formality of a system, affords the most ample proof in itself, that debility, not increased action, was the cause, and stimulating and invigorating powers, not debilitating and evacuant, were the only proper remedies of all such morbid cases. To which of the opposite plans of cure our practitioner here has adhered, or whether he has adhered to either, and not in a great measure confounded both, we are now to examine.

The first article in his first prescription, which was a dram of Peruvian bark taken every three hours, was proper enough in kind, but insufficient in quantity ; nor was that defect sufficiently compensated by the pint of wine, weakened by the addition of half as much water, given in the course of 24 hours. The general indication of exciting vigour receives a little further support from the addition of the anodyne draught. But, so little of it was allowed, that, upon the whole,

whole, the stimulus administered to the patient was far short of the degree that increasing debility required. Accordingly we find the effect correspondent to the imperfect quantity of the remedy. The nausea of the bark has produced rejection of it by vomiting; his sleep has been ill; his skin remains hot and dry; and he has been harrassed by uneasy dreams. Such sleep is a constant consequence of under-doses of laudanum; and the other symptoms shew, that the general debility, which forms their cause, has not been perceptibly diminished. It might have appeared, that since the last prescription, though deficient in quantity, is such in quality as might have occurred to a person whose indication of cure was to diminish debility; and, though such a supposition might have been further warrantable from the author's having it in his power to peruse a book, in which this doctrine has been delivered, and also from his hearing in conversation, or otherwise, of the new plan of cure, and its surprising success; yet we have convincing proof, from the first article of his 2d prescription, that no such indication of cure ever solicited his attention. That unlucky heat and dryness upon the surface, the phenomena that have given occasion to the fabrication of the doctrine of spasm, has weighed with him to deviate totally from the new indication, and prescribe an anti-

monial solution, forsooth, to remove this supposed spasm as the cause of the heat and driness; and the debilitating operation of this loathsome drug is even ordered to be carried to its highest degree, that of vomiting. Nay, such is the hurry and impatience to get at this charming remedy, that the patient must set about taking it immediately. The bark is properly omitted; wine, fomentation, and the anodyne draught, are continued. Here we cannot compliment the practitioner's adhering to any plan, any design of cure, though he might seem to be trimming betwixt the old and the new one. Vomiting, purging, and every tendency to sweat or diaphoresis, cure not a spasm upon the surface; for that is an ideal affection altogether *. But they are most relaxing, debilitating powers; and therefore cannot fail to increase every morbid affection, which depends upon previous debility for its cause. Wine and opium have the contrary effect: and, had they been given in due quantity, the inconsistency of the practitioner's intention would have been complete; as in that case we could have said, that he did as much service with his one hand as he did harm with the other. But as the case stands, while his inconsistency is less, the mischief of his practice is greater; because the balance that the diffusible stimuli, by invigorating

* Vid. Elem. Med. Brunonis, cxix. to cxxvii.

ting the system, would have opposed to the exhausting and weakening effect of the complicated purgation that took place, is, in a great measure, destroyed by the insignificant proportion of the salutary articles, while the mischievous one has a full range over the system allowed to its operation. But here we are reminded of a remark which we have made more than once upon former occasions. Physicians never understood diseases of debility; and even when they made the cure of those, that depended upon a contrary state, by bleeding, purging, &c. which are evidently debilitating powers, they never once dreamed that they were removing excessive vigour, or rather its cause, excessive excitement, by diminishing that excitement. Their dream was, that the cause of the disease was excessive fluidity, and that its cure was diminishing that fluidity.

This was wofully mistaking a remote cause for the proximate; and, by placing this last in the quantity or state of the fluids, the true cause, which is the degree of excitement, was overlooked. Accordingly, since the time of Hippocrates to the present, though the word *excitement* has been mentioned, and different degrees of it perceived; and of late a term has been invented, and a very clumsy one indeed, to denote a degree of excitement opposite to the highest degrees, viz.

collapse;

collapse; the true nature of excitement was never understood, much less considered as the cause of all the phaenomena of life, in health, bias to disease, and actual disease. Instead of establishing it as the true cause, certain effects of its varying degrees have been considered as such. Thus, when the excitement is very high, its effect in the vessels upon the fluids is to give the latter a certain consistence in proportion to the completeness of the diffusion arising from it. This state of the fluids was supposed to be a state of viscosity; but it is in fact a state of tenuity and greater fluxibility. On the contrary, in lower degrees of excitement or debility, the diminished excitement in the vessels, by acting less forcibly upon the fluids, renders their diffusion less complete. In consequence of which, the watery parts which are blended with the more viscid, and kept in a proper state of diffusion, spontaneously, without any force behind, nay, for want of force all around, separate from the more viscid, and run off by the several colourless excretories. Here another error arose. As a prevalence of watery fluidity was perceived in the several excretories, it was most unguardedly concluded, that a correspondent tenuity prevailed in all the rest of the vessels. Which was not the case in the blood-vessels. On the contrary, the true state of the blood, in consequence of this depri-

deprivation of its watery parts, was a prevalence of viscidty. But, though they had been right in their estimation of the crasis of the blood in these two cases, they were still fundamentally erroneous in mistaking such crasis for the cause of the disease. It was nothing but the effect of the cause. And, by establishing it as the cause, they were led into a pernicious error in the indication of cure; which was, to attenuate the blood when too viscid, and to inspissate it when too thin. But we know of no powers which, by thus altering the consistency of the blood, have the least effect in removing the two opposite forms of disease which we have stated. Consequently the only remedies suggested by this indication of cure are useless, or worse; and no one of the remedies pointed out by the just indication of cure, which is to increase or diminish excitement, is in the most distant manner suggested. Upon this principle, therefore, the only plan of cure that could occur was a frivolous or pernicious one; and if at any time any disease was cured, it must have been by remedies to which the physician was not directed by his indication. And hence it is that the only effectual remedies for idiopathic disease, viz. debilitating powers in cases of too great excitement, which constitute the phlogistic diseases; and stimulating invigorating powers in deficient

excite-

excitement, which is the cause of the asthenic form of diseases, were altogether overlooked; which was the fact to the whole extent of the asthenic cases. Or, if bleeding and purging, &c. have been employed, it was not from any knowledge either of their proper operation, or of the nature of the disease; but with a view to alter the state of the fluids, or, upon some systems, to remove a local state of the solids. But while their effect upon the fluids, upon this supposition, was altogether imaginary; and though they were proper remedies for removing phlogistic diseases; from the ignorance we have pointed out, their use has been extended to all the diseases of debility, and even of the greatest debility, compatible with human life.

This detail of error, to so great an extent, was the unavoidable consequence of mistaking the cause of the disease, and the operation both of the powers producing and removing it. In the present case, the purgative solution operated very generally. For, besides the vomiting and purging, we find the tongue moist; which shews, that its relaxing effect extended over the whole alimentary canal. Such general relaxation was the certain consequence of an increase of debility, occasioned by this injudicious article. The dryness of the skin is compatible with such debility, and takes place in a certain degree of it. But, when the debility is further increased, the same

same relaxation of the vessels on the surface, and increase of their excretion, also occurs. Of this we have certain proof, both in other affections of great weakness, and particularly in the advanced state of proper fevers. In which, to dryness on the surface, which first occurs, colliquative diarrhoea succeeds, and colliquative sweats to this. That the increased state of excretion, which takes place in the alimentary canal, as well as the dryness of the external surface, depends upon an increase of debility, is clearly proved by an evident increase of the symptoms of debility, particularly the frequent nausea and vomiting. These symptoms were further increased after exchanging the antimonial for the saline draught; after which we find actual bilious vomiting take place.

Next, to stop the vomiting, a pretty tolerable dose of opium is prescribed to be taken immediately; and, to counteract its supposed effect of rendering the belly costive, a purge of Glauber's salt and crystals of tartar, with some small cinnamon-water to render the doses more agreeable, are ordered. Here I repeat a remark which I have already made in this case. It is astonishing that physicians should give so frequently into the practice of undoing by one remedy the effect of another prescribed at the same time. The real operation of opium is highly stimulant to the whole

whole body, and particularly to the alimentary canal. As purging, therefore, and vomiting, equally depend upon debility, it is equally well suited to check both. And though the vomiting be an urgent symptom at present, and it was therefore desirable to stop it, there surely was no reason for bringing back an urgent and principal symptom of the disease, that is, purging. Accordingly, the purging is not only brought back, but the vomiting still continues, and continues in a bilious form. This might have been easily foreseen. For, as both purging and vomiting depend upon debility, though a prevalence of either might procure some temporary diminution of the other, yet it must increase the common cause. Which actually happened in this case; where part of the purgative was thrown up every time it was administered, and still proved abundantly purgative. The opium had the effect we assigned to it; but that effect was counteracted by the other article. In one word, through the whole of this case, nothing has been done to diminish the original morbid state. For, if some of the articles must be acknowledged to have had that tendency if the affection had been idiopathic, or to have proved palliative upon the supposition of its being local or symptomatic; yet they lost their efficacy; 1st, Because, upon the whole, they were not given in sufficient quantity

tity at any time of their administration; *2dly*, Because they were not supported either by repetition of themselves, or alternation with other equal or more powerful stimulants; and, *3dly*, Because their effect was constantly counteracted by remedies of a contrary operation, viz. evacuatory and debilitating. This last error has been practised to all that extent and variety that ingenuity, exercised with the sole view of doing mischief, could have devised. We have seen, that, with a remedy intended to check excessive vomiting, a purgative, which increases the cause of that symptom, was conjoined, and frustrated both the intention for which it was given, that of checking the vomiting, and counteracted what should have been an intention, viz. to remove the tendency to purging. But this day, while the vomiting still remains, the purgative is omitted, and an emetic is prescribed. Thus, besides all the other contradictions, and after repeated purging to cure purging, we see at last vomiting prescribed to cure vomiting. The consequence of this, next day, is not incompatible with what might have been expected. Several symptoms of extreme debility and approaching death now appear. And, if the patient did not vomit, it was from the small degree of strength, which is necessary to support that effort. In these circumstances, the shaving of the head, and four ounces
of

of wine every two hours, were ordered. The patient died in a few hours after.

Upon the whole, the treatment of this case exhibits a memorable example of the ignorance of physicians of the human œconomy in health, of the change in it which constitutes disease, of the nature of the several powers operating upon it, and producing either state, and of the operation of those powers which remove disease. It has been proved, that every disease which does not consist in a mere alteration of the organization of a part, but that depends upon an universal change in the state of the œconomy, is always reducible to one of two states, an increase or diminution of the vital power, very properly denominated *excitement*; and that the only proper idea of removing such morbid state is to remove the excess or defect of excitement. It has been shewn, that all the powers producing or supporting animal life operate by producing excitement, and that they only differ in the degree which they produce. It has been demonstrated, that certain functions of the animal body, such as the energy of the brain in thought or passion, muscular action, and the effect of the blood and other fluids upon their respective vessels, though these also depend upon excitement previously produced, also contribute with other powers to the support of excitement. In one word, all an-

animal life is shewn to be excitement; health a certain suitable degree of it, and disease an excess or defect of that degree. It has been proved, that, in either health or disease, whatever be the state of any part of the body, that is the same with the state of the whole; and that there never occurs in life a diversity of states at one and the same time. In short, the whole indication of cure of every idiopathic affection, is to increase excitement when deficient, and diminish it when excessive. As excess may occur upon the principles laid down, which has been grossly and imperfectly perceived by physicians, the author of this work has been the first to demonstrate, that defect may also occur, and that it actually much oftener occurs, and that by far the greatest number of the modifications of disease is from this source.

All this has led to a very new plan of physiology and pathology, and a very new plan of cure. Dr Brown has proved, that the reasoning and curative part of physic at present is widely different from the truth: that they have stumbled upon an article or two, in their innumerable remedies, which are suited to remove excess of excitement, such as bleeding and purging; but, that they never knew in what manner these proved serviceable, and that they have ever remained in complete ignorance of the causes of disease, depending upon de-

Q

fect

fect of excitement. Their ignorance in this respect is most clearly illustrated by the treatment of the case before us. It was a case of pure debility. And, though opium and wine have been prescribed in it, we have however shewn, that the most powerful of the two, opium, was not intended to increase excitement, or to affect any state in common to the whole system, but to check supposed excessive motions in the alimentary canal. In short, it was given to stop purging, and sooth pain in the intestinal canal. That this was the intention of the administrator of this remedy is evident from the face of the case, from the professional acknowledgment of physicians, and their known opinion of the operation of opium, which is, that it acts as a sedative. They have some idea that wine is a stimulant; and upon that footing avoid its use in some phlogistic diseases. But whenever they use it in cases of debility, to which its stimulant operation is highly suited, they never give it with that view. Their intention in using it is either to prevent or to remove putrefaction; or, in some cases, to act as a charm. That the latter is oftent their hopeful intention, can be fairly inferred from the insignificant quantity in which they prescribe it, and from their placing it in a group of remedies which effectually counteract its operation. This, too, is exemplified in the present

present case; in which emetics and purgatives in large proportion are, through the whole cure, opposed to a very scanty allowance of wine. How to explain their reason for giving a tolerable quantity of wine a little before death, or in the very article of death, after avoiding it, or giving it in a quantity that can answer no effect whatever, and after using every kind of debilitating power through the whole previous course of the disease, I confess myself entirely at a loss. As far as I can penetrate, however, into any intention at all in this absurd practice, it is this. Till the extreme period of the disease I speak of, as well as other diseases of debility, they are constantly impressed with a notion, that plethora or mobility, affections proved to have no existence in nature; in fevers, that reaction, as it is now called, viz. increased action or irritation, always occurs, and contraindicates the use of wine; and they at last begin to see the true state of the system, debility, when the imminent approach of death puts it out of their power to suspect any thing else. If this be a fair account of what passes in their mind in their estimation of vigour or debility, it will serve as a very good illustration of our former assertion, that though debility is the most frequent and prevalent cause of disease, physicians have never been able to discover it. We conclude our remarks by observing, that the

only indication of cure in this case was to increase excitement; and the only remedies adapted to such indication, was the use of the several diffusible and durable stimulants, in the proportion and order which we have so often pointed out. And we contend, that the method of cure which was here pursued was more effectual towards exciting a typhus fever, though there had been none in the system before, than the original cause of any typhus whatever, or even of the plague itself.

WILLIAM GOODWIN, *Æt.* 23.

March, 30. 1781.

COMPLAINS of universal pains; great prostration of strength; sickness at times; and loss of appetite. Pulse 96. Much thirst; tongue dry, and somewhat foul; belly natural; skin hot and dry. The feverish symptoms have continued since the 24th, and have several times a-day been attended with considerable chilly fits, which have as constantly been succeeded by sweating.

On the 24th, being upon guard, and exposed to cold, his complaints commenced with a violent fit of shivering, much headach, and sickness. Next day he was bled; after which, he thought the headach and sickness considerably relieved.

Yester-

Yesterday he came into the hospital, where he was ordered an emetic, which hath purged and vomited him violently. He complains also of much cough, which is of the same standing with his other complaints.

31.

Pulse 96. He slept well. Tongue very dry; thirst considerable.

Cap. P. Cort. Peruv. ʒi. sexies in die. ex Vin. mixt. ʒiv. Incip. statim. Hab. Vin. rub. ʒj. c. Aq. font. ʒss. Hab. Cerevis. ad ʒiij. Rep. Jul. Salin.

April 1.

Pulse scarce 100, and stronger than yesterday; headach relieved. Tongue moist, but foul; no stool.

Rep. Cortex. & Vin. Fov. crura per hor. 1. & Inj. Enem. ex aq. tepid. ʒss. nisi prius, &c.

2.

Pulse 96. Skin soft. Tongue still very foul, but moist; headach relieved; glyster failed. Slept a little last night.

Contr. Med. Rep. En. vesp.

3.

Glyster operated. Slept but little; has sweated some this morning, and his skin is still moist. Tongue very foul; considerable stupor; eyes heavy and oppressed.

Q 3

Om.

Om^r. Cortex. Rep^r. Vin. u. a. Cont^r. Jul.
Salin.

Let him have tea every morning.

4.

Pulse 120. Skin hot and dry. Tongue parched;
little appetite; great stupor; is costive.

R. Calx Antim. Nitr. gr. iij. Conf. Ros. q. s.
ut f. bol. f. hujus modi doses iij. Cap.
i. tertia quaque hora, incipiens hor. iij.
Fov^r. crura per hor. vesp. Rep^r. Vin.
& Jul, Salin.

5.

Pulse about 120, and of good strength. Pow-
ders have purged him frequently, but did not
vomit; stools and urine passed involuntarily.
Skin dry; tongue foul and parched; great
stupor.

Abrad^r. Capill. & lav^r. frigida statim, &
app^r. Emplast. Epif. cap. Fov^r. crur.
vesp. Contr. Vin.

6.

Epistaxis about 4 o'clock yesterday, P, 100.
Skin soft; stupor and uneasiness sensibly relieved,
Blister countermanded yesterday, but put on to-
day. A bad night, with much delirium and com-
plaining. Pulse to-day 112. Skin dry; tongue
parched. Great stupor; and stools and urine
still passed in bed; has a considerable degree of
diarrhoea.

Rep^r.

Rep^r. Vin. ad thils. Aq. font. thils. mixt. Incip. statim. Fov^r. iterum crura per hor. 1.

7.

First blister was rubbed off without effect, and a second applied. Pulse at 11, at 84; at present 96. Tongue last night tolerably moist; drier again to-day, but not so parched as yesterday. No sleep, and much delirium, in the night. No more stools, but the urine still passed in bed. Motion of the tongue very imperfect, but especially on the left side. Took some food to-day.

Rep^r. Vin. & fov. crur. vesp. & cap. hor. som.

H. A. g^{ss}. xxv.

8.

Pulse last night 84, at present 96. Tongue moister, but still foul, and peculiarly weak on the left-side. No stool; urine discharged sensibly through the night, but involuntarily at present.

Rep^r. Vin. Cont^r. Thea.

9.

Pulse last night 110, at present 84. No stool; urine sometimes passed insensibly, sometimes not. Slept ill notwithstanding the draught; and complained much in the night. Slight epistaxis last night; complains of pain about his head and ears.

Rep^r. Vin. & H. A. Inj^r. enem. vesp. nisi prius, &c. Hab. cerevis. ad libitum.

Q 4

Motion

Motion of the tongue better.

Had a bad night as usual; had a natural loose stool last night; urine passed insensibly in bed. Pulse this morning 72; at present about 90, and very feeble. Takes very little food; is uncommonly emaciated, and very weak.

Hab. Vin. pur. rub. ad tbiss. in die, & cap. 3iij. 2^{ta} quaq. hora. Rep. H. A. h. 1. c. g^{ta}. xl.

11.

Slept none last night. Pulse 90, and regular, but easily quickened and fluttered. Respiration hitherto easy; debility increasing; still able to take drink, a little wine, or jelly.

R. Aq. Cin. ten. Aq. font. aa. 3iij. Tinct. Arom. Syr. Simp. aa. 3j. M. Cap. 3j. om. hor. Appr. Sinap. pedibus statim. Rep. Merum ad tbij. in die.

Died at 10 p. m.

OBSERVATIONS.

ALL our remarks respecting this fatal case are superseded by those we made on the former.

CATHARINE NEISH, *Æt.* 24.

March, 1. 1781.

Two or three times almost every day, for 12 months past, has had an hæmorrhagy from the nose.

nose. The blood discharged daily amounts to about two ounces ; though some days she says it has exceeded five or six. For the same length of time, the catamenia, which used to flow three or four days, have been present for little more than one, and discharged in much smaller quantity than before the epistaxis commenced. Once or twice in a fortnight she is seized with fits, which are constantly preceded by signs of numbness in her right hand. This numbness ascends up the arm gradually ; and when it approaches her head, she becomes deprived of all sense. When she is in this state, which is only for two minutes, she is violently convulsed, and is observed to discharge an uncommon quantity of saliva. When she recovers, she has a great inclination to sleep. These fits have continued to recur for upwards of these 10 years : one year previous to which she had an hemiplegia, which remained for about a month ; and during some time of its continuance she was blind, and for a fortnight deprived of the power of speech. A year ago she passed some worms. Appetite better at one time than another. P. 76. Belly regular.

2.

Catamenia fluunt hodie.

3.

Catam. fluunt.

Catam.

4. Catam. cessarunt; epistax. contin. once to-day, and five times the day before yesterday. Aura yesterday returned to the shoulder, but not followed by a fit.

Mitt. Sang. e brach. ad 3x. App. Emplast.

Epispast. Nuch. & cap. Pil. Cærul. bis in die.

5. Blood natural; two returns of the epistaxis, but less copious than formerly. No fit nor aura, nor any effect from the pills.

Cap. Pil. Cær. iij. in die.

6. Some epistaxis again yesterday. Complains of pain of shoulder. Thinks the pills purge her a little. Pulse natural; no appearance of fits.

Cont. Med.

7. Two returns of epistaxis at 8 last night, and 11 this forenoon. Complains of severe pain of left shoulder. Thinks the pills purge her twice a-day.

App. Emp. Vesic. parti dolent. Rep. Pil. iv. in die, & cap. Haust. Anod. cum g^{ra}. xxv. hor. som.

8. Pain of the shoulder removed. No hæmorrhagy, nor aura, nor fit; 2 stools.

Cap.

Cap. Pil. Cær. ij. 3rd in die.

Had a fit a little after midnight, preceded by numbness in the arm. No epistaxis. Pills purge her 3 times a-day.

Omr. Pil. pro hac vice.

Diarrhœa gone; no particular complaint.

Cap. bis in die Flor. Zin. gr. v.

Some return of epistaxis last night; no other complaint.

Rep. Flor. Zinci ad gr. x. bis in die.

Slight epistaxis last night. Threw up her powder to-day.

Induat. Setacea Nuchæ,

Rep. Pulv.

No bleeding at the nose; no more sickness.

Rep. Med.

No complaint but headach, to which she has been subject.

Cont. Med.

Return of epistaxis last night. Let her have a dresser.

No

17.

No more epistaxis. Seton begins to run.

Rep^r. Flor. Zinc. bis in die.

18.

Return of numbness in the arm; but no fit or epistaxis.

Contr. Med.

19.

Return of epistaxis this morning; no other complaint.

Contr. Med.

20.

Small bleeding at the nose this morning.

Mitt^r. Sang. e brach. ad 3viii. Rep^r. reliqua.

21.

Blood has a firm buffy coat; severe fit last night. No epistaxis.

Omitt^r. Flor. Zinc.

Cap. Pulv. Cort. Peruv. 3j. ex Vin. mixt. 3iv.

24.

Catam. fluunt; has taken no medicine.

26.

Pulse natural; no complaint but headach; bad taste in her mouth, and want of appetite.

Cap. vesp. Pulv. Ipec. gr. xv. p^r emet.

Omitt^r. Cortex hodie; rep^r. cras.

27.

Vomit operated well. Slight epistaxis; after it headach; bad taste of the mouth continues.

Contr. Med.

Head-

28.

Headach continues: no epistaxis, nor numbness of the arm; but a fit, as formerly, about one in the morning.

Contr. Med.

29.

No complaint but toothach.

Cap^s. ter in die P. Rad. Valer. Sylvest. ʒi.

30.

Considerable epistaxis last night; no fit.

Rep^r. Med. ad ʒss. ter in die.

April 1.

Severe headach yesterday, which is not quite gone to-day. No fits nor epistaxis.

2.

Headach ceases, but not quite removed.

Contr. Med.

3.

Has had two fits, not like the former ones, as she heard during the course of them, but could not speak for a ball in her throat. Complains to-day of very severe headach.

App^r. C. C. temporibus, et educ^r. sanguis ad

ʒviii.

4.

Has had several more of the same fits, with a ball in her throat.

Om^r. Pulv. Valer. Cap^s. bis in die Æth. Vit.

ʒi. more solito.

5.

5.

Has had two hysterical fits in the course of the night and this morning; and was threatened with another, which was stopped by the æther.

Cont. Med.

6.

Two hysterical fits since yesterday; headach still very severe; headach most severe on the side not cupped.

OBSERVATIONS.

PHYSICIANS, in their judgment of morbid affection, are nowhere more erroneous than in their pathology of those diseases, accompanied with periodical discharge of blood, to which they give the name of *hæmorrhagiæ*. Respecting them, their fundamental hypothesis, which influences all their reasoning and all their practice, is, that the several diseases of this denomination depend upon plethora, or a greater quantity of blood in the system in general, and in some particular part, than is suited to produce the state of health. They imagine the exorbitant portion is constantly tending to burst the containing vessels, and thereby discharge itself from the system. That this is the tendency of an excessive quantity of blood, and the true state of the fact with respect to the cause of hæmorrhagies, is agreed on all hands. But they have differed, and still differ, with

with respect to the manner in which this supposed phænomenon proceeds.

Some have thought hæmorrhagy, especially the hæmorrhoids or piles, and likewise bleeding from the nose, salutary : And therefore, instead of suppressing such evacuations, and removing the cause which constituted the disposition to them, they have, on the contrary, often purposely endeavoured to produce them by artificial means ; and when they occurred, either in that way or spontaneously, they thought it good practice to cherish them and keep them up.

The celebrated Dr Staabl was, in the last century and the beginning of the present, the professed leader of a considerable sect of this kind. He supposed plethora to be a very general cause of disease, and that the system was constantly generating more blood than was compatible with its healthy state ; and that therefore the cure of such morbid tendency, and of its consequence, morbid state, was to be effected, not by the ordinary means, according to the practice of others, of diminishing the quantity of blood by the several modes of bleeding, but by such evacuations as spontaneously arose in the system, or by a dexterous imitation of these. This operation in the system he considered not as fortuitous, or proceeding from faulty treatment of it ; but as the effect of an intelligent power presiding over the

the system, perceiving morbid bias or state, and possessing the power of exciting motions to remove or relieve these. It will easily be perceived, that physicians, who, in consequence of their erroneous judgment of the nature of the animal œconomy, and of the operation of the powers acting upon it, would unavoidably run into a wrong practice for the cure of diseases, must have often been very sensible of the impotency or hurtfulness of their practice; and if any body taught them, as Hippocrates had done long before, and as Staahl more professedly did then, that the system, or constitution, had a power of curing diseases, they would naturally disburden themselves of superfluous anxiety about a thing that they knew they had not power to amend, and transfer their whole dependence for the cure of disease to this supposed energy of the constitution. This was accordingly the fact with Staahl and his followers. And it has been justly observed, that their practice was proportionally impotent or nugatory. But this plan of conduct did not distinguish the Staahlians alone. It has been followed by others, and for the reason lately assigned, who did not profess the Staahlian doctrine: and all that we have further to observe upon it is, that it is as much better than the one more generally received at present, as a timid and deficient practice is preferable

ferable to a daring and mischievous one. Such as it is, it has received its complete refutation only from the author of the new doctrine. And indeed it was only in consequence of the discovery of a just and rational medical doctrine, that the errors, either of this or any other erroneous one, could be distinctly detected *.

While Staahlianism, as we have said, has been greatly extended beyond the limits of the sect who formerly professed it, its fundamental hypothesis, plethora, has been adopted by every sect of dogmatists, however much they pretended to differ from it in other respects. Nay, empiricism itself has ever been deeply imbued with it. The truth is, it has universally passed as a fact; and it is foreign from the idiom of empiricism to pretend to reject facts. Let the reader recollect what was said before of Paracelsus, that he would take facts from any person, nay, even from the devil. There are many practitioners in Britain at present of that way of thinking. But we cannot help observing, that it leads to a devilish practice. We have before given our reasons for this assertion. And we now add, as a corollary from all that has preceded, and as strictly conformable to all that is to follow in this work, That while the theories of physic of every kind, that have hitherto been fabricated, are completely

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false

* El. Med. xciv. to xcix.

*false conceptions, the far greatest number of its facts are equally contrary to truth.

1 The doctrine of plethora, among all sectaries, except the professed Staahlans, has been doubted by nobody. The only difference of opinion concerning it respects the extent of the system which it may occupy. The only contest about it is, Whether it be universal or partial *? But, without dwelling unnecessarily upon the subject, we say, *à priori*, that both these ideas are false; and that for the following reasons. That these may be laid before the reader with more clearness, we shall first state the facts respecting this matter in the briefest manner.

3 In the first place, the matter from which the chyle, and consequently the blood, is made, is the food taken into the stomach. The condiment, which we can join with it, is taken in too small a quantity to contribute towards that effect, by affording matter for the formation of blood. And a very moderate quantity of water, whether taken by itself in the form of drink, or conjoined with other substances, or entering into the consistence of our food, is sufficient to furnish all the water which enters as an ingredient in the mixture of our food †. When any thing below that is taken in, thirst is excited, and the necessary quantity supplied by it; while every thing above

* Elem. Med. Brun. cccvi.

† Brown's Lectures.

above passes along the vessels in an unmixed state, or that of a very loose diffusion, and readily makes its way by the several watery excretories. It is the food, therefore, almost only, which furnishes the matter of blood *.

Next, we have to observe, that food is productive of this effect in proportion to its nutrient quality. The kind of food most highly productive of this effect is animal; particularly flesh, and the several forms of diet prepared from it. But salted, indurated, and tainted flesh, such as is employed on long voyages from necessity, and voluntarily by other persons under no such circumstances, is an exception from this observation. Next in nutrient quality is fish; with the exception of the salted, indurated, and tainted preparations of this kind of matter. It is needless to observe, that, in both the fleshy and fishy forms of food, there is a scale of nutrient quality. To give the detail of these would lead us too far from our subject. It is sufficient here to remark, that the young and succulent kind of both is proportionally more nutrient, and productive of a greater quantity of blood, than the older and drier.

While both these forms of food, prepared from the animal kingdom, especially the former, may afford sufficient quantity of blood, our next remark is, that the several esculent matters of the vegetable kingdom, when used with too sparing a quantity

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* El. Med. cxli.

of the other two, and especially of the first, but more certainly when depended upon alone, afford too little blood *, and are not an aliment sufficient for man. This subject has been illustrated before ; therefore we need not enter any further into it, than to say, that while such is the judgment to be formed of the deficient nutrient quality of vegetable matter in general, there is also a scale of the nutriment afforded by it.

The farinaceous matters stand next to the most weakly, nutrient, fishy matter, being still weaker than it : below them stand the roots ; and below the roots, greens and fruits. There may be a few exceptions from the several particulars of this detail ; but it is of no consequence to stop here to point them out. The scale is adjusted in much more than its outlines in the exactest proportion † ; and made out, not from random speculation, but by a large induction of experience and observation ||.

The blood, as formed from these different materials, is more or less abundant, in degrees proportional to their quantity and respective nutrient quality.

But the quantity and quality being both given, the proportion of blood generated in the system

will

* Elem. Med. Cod. M.

† See above on the gout.

|| Brown's Lectures.

will vary according to the degrees of stimulus applied, as arising from them, acting by stimulant operation, and from all the other powers which operate upon the system by stimulant effects. In a word, the quantity of blood formed in the system will be in proportion to the quantity of matter from which it is supplied, and the degree of excitement induced upon the whole system; either by it, as acting by distending and stimulating the vessels; or by all the other powers acting by their direct stimulus upon the excitability over all, independent of the peculiar stimulus excited on the vessels *~~2~~. Accordingly, an Englishman will have more blood in general than a Scotsman, the latter than a Gentoo, and the Gentoos than the Bramins, who mortify themselves, both in other respects, and by greater abstinence than they. It will not be necessary to lead ^{you} the reader into a further detail of this piece of doctrine, founded upon observation and experience, consistent in its several parts, and consonant with ^{your} ~~his~~ own good judgment and reason. We hope ~~he is~~ ^{you are} now prepared for the conclusion we are to draw; which is, That the great quantity of blood in the system of any animal, and therefore the human, must be always in proportion to the quantity and quality of matter from which it is formed, and the vigour

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of

* Elem. Med.

of the system performing the conversion and assimilation of that matter into its own nature. The first application from this conclusion is, That the greatest quantity of blood must be generated in the most robust persons: that there will be a due quantity, compatible with the most perfect health, when food and all the other stimulant powers have been applied in a due degree: when these have been applied in a higher degree, so as to form a bias to diseases of excessive vigour, or actually to produce these diseases, that the quantity of blood will be proportionally greater: that it will be less, and insufficient for the support of perfect health, when the several powers mentioned have been applied in an under proportion, and have thereby formed a predisposition to diseases of debility, or these diseases themselves; and that in this case, according to the degree of diminished application of the stimulus of food and the other stimuli, general debility will arise over the system, and a morbid deficiency of blood will occur in an exact proportion to that.

See how all this agrees with the doctrine of plethora. Physicians have never talked of plethora as subsisting either in the predisposition to phlogistic diseases, or in these when actually formed. They have indeed, in their practice, bled largely in the latter case; but not with

a view to diminish an excessive quantity of blood prevalent in the system. The design was, according to one system, to carry morbid matter out of the body *; according to another, to attenuate the inspissated fluids †; according to a third, to remove a spasm, by diminishing reaction, supposed to be the effect of such spasm ‡. The cases in which they have supposed plethora to prevail, are the several Hæmorrhagiæ: which are either never phlogistic, or only such for a very short time after their commencement; and through all the rest of their course diseases of debility, and of a corresponding under-proportion of blood ||. The discharge of blood taking place in these cases, has been the principal circumstance from which they have been led to attribute the effect to plethora. But I must here observe, that all the known facts are against that conclusion. The strongest men, and therefore those who have the largest proportion of blood, are not the subject of the piles. And who, that has eyes on the outside, or sense in the inside of his pericranium, upon seeing the puny relaxed state of women labouring under flooding, especially long and severe, after all the blood that is lost by the discharges, all that perishes by artificial bleedings, and other evacuations employed by practitioners for the cure; and when to this he adds, that through

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the

* Elem. Med. Brunonis c. † Ibid. cv.

‡ Ibid. cix. to cxxix.

|| Ibid. cclxxvii.

whole course of the disease, which is but too often, under the present management, both tedious, severe, and exhausting, the woman takes little or no food, and has less power to convert what she takes into a proper quantity of blood; who, I say, would hesitate one moment to pronounce, that this is a case of both evident and prodigious debility?

The same thing is to be said of the bleeding from the nose, so often an affection of relaxed and enfeebled old men, and of young ones debilitated by fast growth and other circumstances. In such a state of circumstances, nothing can account for the supposition of plethora being the universal cause, but an equally universal suspension or destruction of the exercise of the mental faculties among practitioners *. The idea of plethora, as the cause of the gout, has been amply refuted. And it can be equally fully disproved in asthma, in epilepsy, in palsy, in apoplexy itself where it is genuine and idiopathic, in hysteria, in the indigestion of old men, in colic, and in every other case in which it has been supposed to occur †.

The last argument which we adduce against the doctrine of plethora, is the universal failure of the common cure in all the cases we have mentioned, and the surprising success of the new plan

* El. Med. and Brown's Lectures. † El. Med. See the Chapter on *Hæmorrhagia*.

plan nearly to the same extent. Dreadful have the reasonings of physicians been upon every subject of their art. They have not only not been ashamed to maintain, that different effects can arise from the same cause, but that different causes could produce the same effect. No language is so common with them as to say, that purging will cure purging, vomiting remove vomiting, bleeding prove the remedy of bleeding; and that all the means of debilitating that would kill a giant, make a proper plan of cure for a person expiring under debility.

We find every one of the observations we have made on the nature of hæmorrhagy, transgressed in the treatment of this case. First of all, 3x. of blood are taken from the arm. This is an example of curing bleeding by bleeding. Next the pil. cærul. are given with the effect of purging her. After that, a blister is applied to the pained part of her shoulder. The amount of the use of these articles is, that so many modes of evacuation were employed to remove a sanguine one. To these are opposed 25 drops of laudanum. Now, though this is not the fourth part, as we have more than once observed, of the proper dose, and the weakness of the system and laxity of the vessels must have been much increased by the evaculatory plan; mark the effect, however: "Pain in the shoulder is removed;

“ moved ; no hæmorrhagy, nor aura, nor fits ;
 “ two stools.” Next, as if two stools had not
 been enough, we find the anodyne, which had
 done the only service, omitted ; and the pills,
 which had done the principal mischief, alone
 relied upon. At last it seems to have been per-
 ceived that the purging produced by them was
 excessive, and they are therefore laid aside. Con-
 sider the effect of this : “ Diarrhœa gone, no
 “ particular complaint. Capiat bis in die, florum
 “ zinci grana quinque.” This powder is next
 day given in double the quantity : But the epi-
 staxis returned, and the termination of its effect
 was a new symptom. She gets next a seton in
 her neck : For six days following there is some
 appearance of a slight relief. Here it is to be
 observed, that the operation of the zinc, if any
 at all, is a stimulant one. But, from the whole
 history of its effects in the cases of debility, to
 which it has been applied, it appears, that these
 are too inconsiderable to justify any practitioner
 for depending much upon it. As its operation,
 however, is good in kind, though improper from
 its slowness in degree ; we may here observe,
 that a practitioner who knew not this, did bet-
 ter in using it, as being a medicine of some ten-
 dency to do service, than in inculcating directly
 destructive ones. He is, however, all in the
 dark ; and, so unacquainted with the ope-
 ration

ration of any of the means he employed, that he now recurs to the worst of them all, and orders other ʒviij. of blood to be taken from the arm. The consequence of which was, according to the next report, "a severe fit last night." This, however, gives him very little alarm; because "the blood had a firm buffy coat." The catamenia now appear. Nothing therefore is done through the following night: But this day xv grains of ipecac. are ordered for a vomit; and the Peruvian bark, which had been ordered the day before, but not taken for the nonsensical reason before assigned. To fill up the measure of evacuation, we have in this a new one super-added to those already mentioned: And it is repeated with a dram of Peruvian bark in ʒiv. of a mixture of wine. Here once more are remedies of the most opposite operation conjoined. In a disease depending upon weakness and relaxation, and increased by the weakening relaxing effect of all the other evacuant powers formerly mentioned, we have now one of the most weakening and relaxing of them all, full and repeated vomiting, conjoined with bark and wine. If the latter had been given in due quantity, as their effect is invigorating and stimulating, there would have been a curious struggle betwixt pernicious and salutary powers, administered to operate upon the system at one and the

the

the same time. And, as the belligerent powers were kept a considerable time upon the field, from their mutual equality the conflict must have been exquisite, and at best a drawn battle, the result of their exhausted powers. There is one practitioner only whom I have heard of who sends his medical forces to the field with this equality of contending energy, the prince of quacks, Dr Graham. He bleeds enormously: But to the proportional debilitating effect of that, he opposes his ætherial, electrical, magnetical forces, &c. which are highly diffusible stimuli; the effect of which is, to leave the patient where he was. But, to do justice to him, upon some occasions it would appear from the temporary success of his practice, that he sometimes gives superior advantage to the latter. This, however, is never the case with the regular practitioners. They have never been acquainted with diseases of debility, and therefore with the remedies suited to remove that. Opium has been indeed used a considerable time; but, from their ignorance of its operation, they never could use it in a proper manner. They have been of late taught, that it is a stimulant; and, though they do not confess it, they probably begin to use it as such: But they know not in what quantity to use it, or the cases to which it is suited, as we have repeatedly

repeatedly observed, and as has appeared in the present case.

The same observation applies to the use of bark and wine in the present case: They are prescribed in such an under proportion, that their salutary tendency must be more than defeated by the hurtful one of the vomiting opposed to them. As they are therefore continued for many days, the effect of their use must be an increase of the sum of debility. During this a scruple of valerian is prescribed, and eight ounces of blood taken. Last of all, vitriolic æther is prescribed; which is again opposing an highly diffusible stimulus to a very debilitating power. The disease, as appears from the four last reports, increased upon the whole; which is what any person, imbued with any proper knowledge of the animal œconomy, could have easily foreseen. What became of this patient we know not, for we have no report of her dismissal or death. We can say no more, therefore, but that we fear the fate of the poor woman. Let the reader observe, that her fits, before she came into the hospital, returned but once or twice a fortnight; and compare that with the frequency and severity of their return after her treatment there: and let him draw his own conclusion, and judge what may be the cause that hæmorrhagy and many

many other diseases have been esteemed the *opprobria medicorum*.

BETTY MILLER, *Æt.* 21.

March 14.

ON the 10th instant, having been exposed to cold, she was that evening seized with a violent acute pain of her head, particularly affecting the fore-part above the eye-brows. Next day the headach continued, and she complained much of sickness: she got a vomit that evening, which relieved the nausea, but the headach still remained; and she was hot and feverish all that night. On the 12th she had returns of the sickness and vomiting; for which the emetic was again repeated, but with little alleviation of her complaints.

From the 12th she has been confined to bed, owing to the severe headach, which is excruciating in an erect posture. Pulse 66. Skin hot and dry; body and menses regular; eyes impatient of light.

Cap. Sol. Antim. $\frac{3}{4}$ ss. om. $\frac{1}{4}$ hor. ad vomit. usq. Incip. hor. 4^{ta}. Fov. crura per hor. 1. vesp. Cap. Jul. Salin. $\frac{3}{4}$ j. 3^{ta} quaq. hora.

She has been frequently subject to headachs.

Pulse

15.

Pulse 66, and soft. Sleeps much; headach;
tongue clean; appetite bad; body open; vomit
operated well.

Rep^r. Jul. Salin.

16.

Headach still severe; sleep and appetite bad;
body open; tongue clean; thirst considerable.

Admov^r. Cucurb. cruent. nuchæ, & educ.

Sang. ad 3viii. Rep^r. Jul. Salin.

17.

Pulse 90. Skin cool and soft; tongue clean;
some delirium in the night; body bound.

Rep^r. Sol. Antim. 3fs. om. hor. Incip. hor.

4^{ta}. Rep^r. Jul. Salin.

18.

Pulse 72, full and soft. No effect whatever
from the solution; tongue dry; appetite bad;
little or no sleep; much stupor and delirium.

Abrad. Capill. q. s. et lavetur Cap. frigida
è pannillo acet. Rep^r. Sol. ad 3fs. om.

$\frac{1}{2}$ hor. ad vomit. usque. Incip^r. hor. 4^{ta}.

Fov^r. crura per hor. 1. vesp. Rep^r. Jul.

Sal. Injic^r. Enema vesp. nisi prius, &c.

Hor. 6^a. Abrad^r. Capill. statim, et applic^r.

Empl. Episp. cap.

19.

P. 96, and feeble. No effect whatever from
the solution, of which she took 3iiss. as di-
rected;

rected; had a small stool from the glyster; grew faintish, and had a slight convulsion-fit on shaving the head; some threatening of strangury this morning; tongue clean and moist; stupor and delirium as before.

R. Vin. rubri ℥j. Aq. font. ℥viij. M. Cap.
 ℥iv. 2^{da} quaq. hor. Incip. statim. Rep^r.
 Enem. vesp. Omitt^r. reliqua.

20.

Hor. 9th a. m. Pulse 84, and strong. Bad restless night, with much delirium; great thirst; no effect from the glyster. Remarkable squint and double vision.

Inung^r. crura & femora statim. Ung. Mercur.
 & fric^r. probe.

Hor. 12th. Pulse 90. Great stupor; other symptoms as before.

Applic^r. Cucurb. sine ferro temporibus quam
 primum per $\frac{1}{2}$ hor. Cap. stat. Pil. Mer-
 cur. ij. Rep^r. Ung. ad 3ij. vesp. In-
 jic^r. Enema purgans vespere nisi prius
 alv. dejec.

21.

Pulse 108, rather more distinct; but the stu-
 por and delirium continue, as also the squint
 and double vision; some epistaxis at present;
 no effect from the glyster last night.

Rep^r. Pil. & Unguent. ad 3ij. vesp. Om^r.
 Vin.

Vin. Admov. Cucurb. cruent. temp.
& educ. Sang. ad 3viij.

Two drams of ointment were rubbed in this morning.

Pulse 130 and upwards. Arteriotomy performed instead of cupping, and 3x of blood drawn, which is natural. Symptoms much relieved for some hours after the bleeding, but increased in the night, and have been worse than ever to-day; squint and double vision remain, and the vision is indistinct; frequent catching at the bed-cloaths. Had two glysters last night, the latter of which operated; pupils scarce contract at all on the approach of light; no sensible effect from the mercury.

Aperiat. iterum stat. arteria temporalis, & mitt. Sang. ad 3xij. Rep. Pil. q. primum, & Ung. ad 3ij. vesp.

Pulse 102, soft and of good strength. Ten ounces of blood taken yesterday, on which she grew faint; delirium immediately after, rather higher; but soon became quiet, and has continued in a state of stupor ever since; eyes now shut, and she is quite insensible; no urine since yesterday evening; breath slightly affected with the mercury.

Rep. stat. Unguent. 3ij. & 3ij. iterum vesp.

Rep^r. Enema vesp. Introd^r. catheter, nisi prius, &c. Applic^r. Emp. Episp. capiti iterum statim.

24.

Pulse about 120. Great subsultus, rather more distinct; eyes now open; squint and double vision remain; no sensible contraction of the pupils; breath evidently affected; no effect from the glyster; one pound of urine drawn off by the catheter, but none since.

Applic^r. Emp. Episp. amplum nuchæ. Rep^r. Unguent. ad 3ij. stat. Immitt^r. Catheter q. primum. Rep^r. Enem. vesp.

25.

Died at 11 a. m.

On opening the head, the vessels of the brain appeared more turgid than natural, though in the course of the disease 3xxviij. of blood had been taken from the head, and three blisters applied. On cutting into the anterior ventricles, they were found filled with a limpid fluid, and the foramen in the septum lucidum was so distended as to admit a large quill: the third and fourth ventricles were also filled with a similar fluid; and on the plexus choroides a number of hydatids were observed, some of them about the size of a pea. The water contained in all the ventricles did not exceed 3iij. No tumors were to be found in the brain and cerebellum, &c.

The

The pineal gland, glandula pituitaria, &c. were perfectly natural.

OBSERVATIONS.

THIS case is such a one as is commonly denominated *hydrocephalus* : But physicians appear to be all in a wrong train with respect to dropy in general, and more especially in their judgment of hydrocephalus. There is an idiopathic affection which only merits that appellation. It consists in debility of the whole system, greater in the vessels in general than in other parts of the living solids ; still greater in the terminations of the arteries called *exhalents*, and in the corresponding absorbent orifices of the lymphatic system ; but commonly greatest of all in a certain portion of these last named vessels. Under the prevalence of debility occurring in these, as the atony of their muscular fibres is excessive, so the relaxation of the same muscular fibres, considered in regard to their state of density as simple solids, is in proportion to the atony. But as the muscular fibres encircle the vessels, the diameters of the latter are enlarged in proportion to their laxity : Hence the exhalents, without any force from behind, and even in proportion to the debility of the system in general, and of the labouring part in particular, allow a larger proportion of their contained fluid, than is compatible

*The generally
of the system
consists in
debility &c*

tible with health, to escape. Accordingly, a quantity of serous fluid is poured out upon the neighbouring cellular membrane, greater than could be taken up by the absorbents even in their healthy state. But, as the absorbents are in the same state of atony and relaxation as the exhalents, their function of absorption is diminished in proportion to the increase of exhalation. And betwixt the two faulty states of these vessels, an accumulation and effusion take place. When the effusion comes to be very considerable in one part, or to be general; as it is only a certain portion of serous fluid that can be separated from the blood either by the natural or morbid outlets, consequently from an excessive quantity of the effused fluid passing off by the exhalents, there is less left to be discharged by the natural outlets. Hence perspiration and urine are constantly impaired in dropsy; a part of the cause of which, besides the circumstance just now mentioned, is the weakness of the whole system, and more especially of the renal and perspiratory vessels, by which the determination to them is not sufficiently supported. While the effusion remains moderate, so as that it can be removed by the remedies suited to remove the general debility, it may be considered still as a symptom of the idiopathic affection. But, when these remedies have been applied, and have raised the

excite-

*of the exhalents and absorbents - by which
the determination to the renal & perspiratory
vessels is not sufficiently supported -*

excitement in the general system to the due degree, and yet the effusion is not diminished, then it is, that this last must be considered as a symptom of the disease, now converted into a permanent local affection. In such a case, the proper plan of cure is, with the idiopathic indication, to increase excitement, and thereby restore health to the whole system; to divert the flow of serous fluid, from the cavity into which it is morbidly disposed to flow, to a part of the system where the effusion will be quite safe; because, after that has taken place, it can be carried altogether out of the system. Emetics, purgatives, and diuretics, accordingly produce this effect. But the common practice of depending upon them alone for a radical cure, is a pernicious one; since, when carried to excess, which it must be to fulfill the purpose intended, it proves a most powerful means of debilitating the system. While it procures temporary relief, upon the whole it increases the ^{cause of the} disease; and sooner or later, commonly very soon, gives it a fatal termination. To avoid which, since, except the effusion, all the symptoms depend upon the general cause of the idiopathic affection, the idiopathic indication suited to the cure of every disease depending upon that cause, which is in different proportions according to the different degrees of debility constituting the several cases,

ought here also to be pursued. The remedies are, as we have said upon former occasions, first, the more diffusible, and then the more durable stimuli; the detail and manner of applying which, it is not necessary here to repeat.

This is the proper idea of idiopathic dropsy. But with it physicians confound many cases where a similar effusion occurs from very different sources. They suppose the disease the same, and to depend upon the same proximate cause; which is, either increased exhalation, or diminished absorption. Each of these is produced by a number of affections, the most of which are local. These they do not consider as primary and principal, and the effusion as symptomatic of them; which is the only proper light in which they can be viewed. But they look upon them as so many remote causes, all producing the same proximate, and therefore the same disease. Of the arrangement of the causes of dropsy, in this point of view, there is a Table in this University *. In it dropsy, as consisting in increased exhalation, is supposed to be produced by resistance

* The COLLECTION of Serous Fluid giving DROPSY is made,

I. By EFFUSION, depending upon

1. INCREASED EXHALATION, occasioned by

A. Resistance to the return of the blood in the veins

a. By obstructions

aa. In the lungs

bb In the heart

cc In

istance to the return of the venous blood, by obstruction in the excretories, by increased impetus of the blood in the arteries, by relaxation of the exhalents, and by increase of the watery part of the blood. Resistance to the return

- cc. In the liver
- b. By the posture of the body
- c. By a general plethora in the veins, from
 - aa. Obstructed menstrual flux
 - bb. Obstructed hæmorrhoidal flux
 - cc. Obstructed serous evacuations
- d. By obstruction of particular veins, by
 - aa. Polypos concretions in the veins
 - bb. Compression
 - a. By tumours in the coats of the veins
 - β. By tumours external to the veins
 - γγ. Scirrhus
 - δδ. Steatomatous
 - γγ. Bulk of the uterus in pregnancy
 - δδ. Bulk of the water in ascites
- B. Resistance to the passage of fluids by the excretories
- C. The increased impetus of the blood in the arteries
 - a. By external violence, as in strains and bruises
 - b. By fever
- D. By relaxation of exhalents
 - a. In palsy
 - b. In general atony, as in chlorosis and cachexy
- E. By an increase in the proportion of the watery parts of the blood
 - a. By the quantity taken in
 - b. By the watery parts of the blood, retained in consequence of interrupted excretions
 - c. By the grosser parts being drawn off
 - aa. Red globules and gluten by hæmorrhagies
 - bb. Gluten by serous and purulent evacuations

return of the venous blood is produced by obstructions in different parts, by the situation of the body, by venous plethora, by obstruction in some of the veins. And the causes of these are so many local affections producing the effusion which takes place, excepting venous plethora, which is supposed to be the consequence of the suppression of the menses, and of serous evacuations. Plethora, however, is an ideal affection, as has been lately proved *. The true cause of the effusion taking place here, is the same which produces the suppression. It is debility: and, by referring it to plethora in the veins, a very pernicious indication of cure is insinuated; which is, to diminish the quantity of blood. And, in all the other cases, the resistance to the return of the blood is produced by local affections, almost always incurable; such as tumours of the scirrhus, steato-

d. By a defect in the assimilating powers

2. By the rupture of lymphatics
3. By the rupture of vesicles and sacs

II. By the retention and accumulation of fluids naturally poured out in consequence of DIMINISHED ABSORPTION from

1. The obstruction of veins in parts not provided with lymphatic absorbents
2. Obstruction of the lymphatic system
 - A. In the conglobate glands
 - B. In the course of the lymphatics
3. Palsy of the absorbents

* Brown's Lectures.

steatomatous, and other kinds of induration of the vessels, of which the dropfy is only a symptom. It was of essential consequence to distinguish betwixt idiopathic dropfy and this symptomatic effusion; the cure of the former being that we have pointed out; whereas that of the latter is to remove the original local affection; which is not to be effected by the other means of cure, and generally not to be effected at all. In this set of supposed remote causes, there are two droll conceits. Pregnancy, which is a natural state, and ascites, which is a case of dropfy, are said to be causes of dropfy, produced by the resistance to the return of the venous blood. That dropfy may occur in pregnant women, is possible; but the rarity of its occurrence in that state is a proof of its little tendency to that effect. It was altogether nugatory to take it into the enumeration. And effusion, arising from the pressure of effused fluid, is at best only a symptom of a symptom.

The next cause of increased exhalation is said to be obstruction taking place in the excretories. But, if the general system be sound, we know of nothing that can produce obstruction in the excretories. And if such occur, and depend upon a faulty state of the general system, the latter should be specified as the cause. In a word, this affection is both ideal and inapplicable to
any

any purpose. We have a very hopeful cause of increased exhalation, producing dropsy, in increased impetus of the blood in the arteries. The examples of this are, External violence, as distension or contusion; and, forsooth, fevers. But if external violence, operating by distension or contusion, have taken place, the primary affection produced is a local organic one, and the effusion is only a symptom of that. And the cure of the latter must turn entirely upon the removal of the former. What connection, therefore, has this case with the idiopathic dropsy, which we formerly described, more than the several local or symptomatic affections, which operate by interrupting the return of the venous blood? With respect to fever, supposed to produce hydropic effusion by increased impetus of the blood in the arteries, I would wish to know what cases this table-maker refers to. It is often observed, that an effusion takes place at the end of peripneumony, and produces suffocation. But let us see how this happens. The increased excitement, which takes place over the whole system in peripneumony, is more exquisite in the vessels of the lungs, and particularly near the inflamed part. This may go to ultimate excess; and, by exhausting the excitability, put an end to itself. The part, therefore, deprived of its excitement, comes to be in a state of indirect debility. And hence

hence the tone of the muscular fibres of the vessels, considered as living solids, is destroyed; and a proportional laxity of them, as simple solids, is induced. And as these fibres encircle the vessels, and constitute their different diameters, in consequence of their own difference of density, it is understood, in the present case, that the diameters of the vessels are enlarged in proportion to the laxity of the fibres. Fluids were formerly in these vessels; these, therefore, without any activity impelling, flow out: hence the effusion. If, with the affection of the part we have described, the excessive excitement over the whole system has produced a correspondent state of indirect debility over it; in that case, the very precise diathesis, upon which idiopathic dropsy depends, is induced; and the morbid state arising from such diathesis may be considered as a case of real dropsy. But is this the explanation that the tabulist would give of it? I apprehend, not. For, first, it is not the increase of exhalation only, but the diminution of absorption, the diminution of perspiration, the diminution of urine, the diminution of every watery excretion, and particularly that by the belly, which concur to form the cause of the disease. To which must be added the universal debility and diminution of excitement, which produced all these effects, and produced them, not in the labouring part

part only, but over the whole system. This is a view of the disease very different from that which is alluded to by our tabulist. Lastly, after pointing out the true state of the body, upon which the effusion here depends, would it be correct reasoning to say, that the increased impetus of blood in the arteries is any part of the general affection here described?

The increased impetus is itself only an effect of the excessive excitement which produced the whole state of indirect debility. This case of effusion, therefore, in the lungs, does not depend upon peripneumony or any of its symptoms; but is a new idiopathic disease, produced by the transmutation of the phlogistic into the asthenic diathesis*. This case, then, is the only instance of idiopathic dropsy that has yet occurred in our table; but, according to the notions of our author, there was no reason to look upon it as such.

The next cause of increased exhalation is said to be relaxation of the exhalents from palsy, or from universal atony, as in chlorosis and cachexia. This is very beautiful discrimination. In this case, the diseases mentioned are the primary ones, and the effusion is most notoriously a symptom of them. Why then should any person have dreamed of this as being a case of dropsy, depending upon the cause which produces it as a disease?

* Brown's Lectures.

disease? It would be equally judicious to take the several symptoms of any idiopathic disease, and make them so many separate diseases. What end in pathology could such a scheme of distinction answer, but that of infinite confusion? What end in the practice, but fundamental mistake?

Debility, when applied to muscular fibres, always implies a state of proportional atony and relaxation. Why, in this case, should the atony altogether be overlooked, and relaxation only mentioned, as taking place in the exhalents? Does formal palsy, and, what is the same affection in its nature, only less in degree, that is, universal atony, whatever diseases it produces, imply a state of relaxation nowhere but in the exhalents? If that were the case, the only indication of cure would be to remove the relaxation of the exhalents. And here I would put three questions, and desire any physician, who might differ from me in opinion, to answer them. The first is, Are there any remedies known to physicians, which have the power of removing relaxation without changing the state of the general system? Secondly, Do not the remedies which change the state of the general system in every case where relaxation of the exhalents occurs, remove, or tend to remove, the relaxation of the exhalents? Thirdly, If they fail in removing

ving it, I would ask, if they know any thing that would succeed? If these questions cannot be answered, so as to support the distinction here attempted, pray what is the use of such distinction? And if the distinction, besides being useless, leads to the most erroneous intention of practice, is its author not justly reprehensible, and the exposition of the truth equally meritorious? Relaxation of the exhalents is an effect in a part, flowing from the cause of palsy and other atonic affections; in other words, diseases of debility. And the effusion arising from it is an effect of an effect, a symptom of a symptom, proceeding from an universal cause. To remove the effusion, therefore, the relaxation must be removed: but the relaxation cannot be removed without removing the general cause; which is debility, depending upon diminution of excitement over the whole body.

Since, therefore, the effusion occurring here, originates from a cause inherent in the whole body, why restrain its cause to an effect of the general cause occurring in a small part, and cut it off from its true source, the general affection of the system? We have said upon former occasions, that there are only two general forms of disease, phlogistic and asthenic; the former depending upon increased, the latter upon diminished excitement: And we added, that all affections not
local,

local, however numerous they have seemed to be, and however much the idea of their being so many different idiopathic diseases has prevailed, are reducible to the one or other of these general forms; nay, that they are essentially the same, differing in nothing but in certain unimportant and inessential appearances. In a word, so exact is the identity of the essential state, and of so little consequence are the different appearances, that we contend, the latter never imply any real difference; that the essential state in every case is always the one or other of the states we have mentioned; and therefore, that there are only two actual individual diseases. How repugnant to this idea are all the modes of pathology, of diagnostics, of nosology, and all the distinctions that have been so much laboured in the works of physicians? To apply this to the present case: Palsy, chlorosis, cachexia, dropsy, and every idiopathic affection depending upon debility, are only one disease, viz. *asthenia*, depending upon debilitating powers, consisting in a state of debility, and to be removed by stimulating or invigorating powers.

Effusion, therefore, taking place in consequence of the modifications of *asthenia* just now mentioned, is nothing but an effect of the cause of the general *asthenia* accompanied with these inessential appearances in the state of a particular part:

part: It was therefore nugatory and highly confounding, to attempt the distinction here made.

2e The indication of cure is the same in dropsy, without the paralytic and atonic appearances, and with them. There is no variation but in degree; and the rule with respect to that is, to consider the degree of asthenia that has taken place, in order to accommodate a proportional degree of stimulant powers for the cure.

Exhalation, producing hydropic effusion, is next said to arise from an increased quantity of the watery part of the blood, in consequence of too much water having been taken in, or too much retained in the system, from the diminution of excretion, or from the abstraction of the grosser part, as of the red globules and gluten in hæmorrhagies, or from the gluten in consequence of serous or purulent evacuations. The first of these supposed causes has never any share in producing idiopathic dropsy. If the body be in a vigorous state, no quantity of water will operate that effect. A certain quantity of water only unites with the other constituent parts of the blood; and whatever more is thrown into the system, is thrown out again by the several salutary watery excretories, those of perspiration and urine. This is the fact when the body is in perfect vigour. Again, when the body is weakened by all the several debilitating powers, an excessive ingestion of water, in place of
of

of more stimulant drink, may operate as one of those debilitating powers. But in this case it operates, not by its quantity producing a watery abundance in the vessels, but by its debilitating quality. And it may produce this effect of debilitating, without producing watery effusion: Which is true in all the modifications of asthenia, in which hydropical effusion does not occur: And when this occurs, the abundance of watery fluidity may run to the exhalents, and increase the quantity of effusion from them; but it may also run to the kidneys and perspiratory vessels, and increase these natural evacuations, with good, at least not with hurtful, effect: As such, with what reason I am not to determine, has water lately begun to be considered as a remedy of dropsy. While water, not by its abundance, but debilitating effect, may contribute to the enlargement of the effusion in idiopathic dropsy; and is thereby to be understood not to increase the disease, which is a state of debility, but to increase a symptom of the effusion; little blame can be laid upon it as a cause of dropsy, and none as a sole cause. At the same time, in the cases of local effusion, the local causes of these have been enumerated; and therefore in these it may increase the quantity of effusion, but is by no means a primary or fundamental cause.

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With

With respect to the second supposed cause of dropfy, the retention of watery effusion, from diminution of excretion; it is to be observed, that excretion may be diminished, or suppressed, from two opposite causes: phlogistic diathesis, obstructing the secretory or excretory orifices; or weakness of the heart and arteries, in consequence of universal weakness rendering these vessels unfit to transmit their contained fluids, or not propelling the fluids with sufficient force into them. In the former case, dropfy never takes place. In the latter, it either may or may not take place. And, in fact, of the greatest number of modifications of asthenia, though the same state of excretion occurs in them all in a certain part of the course of the disease, yet the same effect arises in none, unless in the single case of asthenia which is denominated *dropfy*.

If the retention, therefore, were a cause of dropfy, it would be always so; but since it proves so only in the case of dropfy, the state of the body proving the cause of which has been already explained, it is not, even in that case, the retention, but the proper cause, that produces the effect. And, in so far as the retention can be supposed to contribute to the effect, it only does so as an effect itself of the general cause. Here, therefore, our tabulist has fallen into the ordinary error of physicians, of mistaking the state of a part
for

for the cause of an idiopathic disease, the cause of which consists in a state of the whole system. The system as a whole they have never viewed, but always considered it as regulated by a number of energies of different parts, without any connection among themselves, or dependence upon an energy uniformly operating over all, and supporting all the particular energies. This supposed cause of dropsy is therefore equally erroneous, and inductive of confusion in the pathology and practice, as the last mentioned.

It is unnecessary to say any more on this table; as every reader will clearly see, that it is hypothetical and erroneous in its matter, and strained and affected in its form and arrangement.

To return to the case, the subject of which suggested the remarks which we have delivered on the table: After being so full upon the form of disease called *asthenia*, we have only to add, that this disease, denominated by physicians *hydrocephalus internus*, or a collection of water in the cavities at the bottom of the brain, is the same however with every other case of *asthenia*, or idiopathic affection depending upon debility. It depends upon debility of the whole system, prevalent in the exhalent and absorbent part of it, and affecting the exhalents and absorbents of the brain, whatever be the kind of vessels that perform the latter function, in a more exquisite

manner than any other. This is its cause ; in which it differs in nothing from any other idiopathic affection depending on weakness, but in the insignificant circumstance of the local part of the affection. It was an idiopathic case, as can be proved by the sound appearance of the several parts of the brain upon dissection : in which no lesion of organization could be perceived, nor any local fault, excepting the effusion of a small quantity of water into the ventricles ; which was an effect, not a cause, of the disease. Nay, it may have been the result of that relaxation of the extreme vessels, which universally occurs in the struggle of death from any cause whatever.

Hydrocephalus is one of the *opprobria medicorum* ; there is no well-vouched instance of any successful cure of it. But, as we have said upon another occasion, it is a greater reproach to them than they are aware of. It is their method of cure that occasions the fatality of the disease. Repeated bleeding, vomiting, purging, clystering, evacuation by urine, and in some measure by the skin ; in one word, opening and relaxing all the excretories, and weakening the activity of the absorbents everywhere, which is the undeniable effect of these means employed by them for the cure ; is the universal practice for the cure of a disease, the cause of which is that
very

very state of the vessels which they create. It is not therefore wonderful, that dropsy in all its forms, and particularly in the present, should baffle the art of practitioners. In the present case, except a little wine, which was of no use from the smallness of its quantity, and its effect being counteracted by the other articles, and which was also soon laid aside, every thing administered to our patient had the pernicious tendency we have pointed out.

As the cause of the disease was the state of the system already mentioned, that is, a diminution of excitement over all, with predominance in a certain part *; the indication of cure arising from that was to increase the excitement over all, and therefore in the part more especially affected. The patient's strength was too far gone to admit of the durable and sound excitement, which food and suitable exercise are calculated to give. In this case, recourse should have been had to the more diffusible stimuli: And, as the debility was not so great as to require the use of the most powerful of these, such as opium, volatile alkali, and æther are; the vinous and spirituous regimen should have been employed to invigorate the whole system, and the alimentary canal in particular. The consequence of which would have been, that the depravation of appetite would

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have

* Elem. Med. xxxvi. lxxxv.

have ceased, the symptoms in the intestines would have disappeared, the whole canal would have received increase of tone and vigour, and the same salutary effect would have been diffused over the whole system. This is not reasoning *a priori*; repeated successful trials of this method of cure sufficiently vouch its propriety. A case given up by the ordinary practitioners, was radically cured in a short time by my good friend Dr Wainman*. And, a little before the time that I am writing this, another pupil of Dr Brown's, the ingenious Mr Hogan, performed a cure of universal dropsy upon an old sailor near 80 years of age, in a vessel that was cruising in the North Seas. This patient laboured under universal anasarca and ascitic dropsy. His legs were so cedematous as to be swelled to an enormous bulk. No evacuant of any kind was administered to this patient. The cure was trusted to spirituous regimen alone: And in less than three weeks time, the patient was conducted from the jaws of death to the most entire and perfect health.

Every thing that we have said on this case will apply to those of ascites and hydrothorax; which we are now going to lay before our reader.

RICHARD

* In the same way he cured a dropsy of the testicle of a child.

RICHARD THOMSON, *Æt.* 19.*March 3. 1781.*

His abdomen is uniformly swelled, tense, and gives evident signs of fluctuation. He has no cough; neither is his breathing in any degree affected, nor is there any swelling of his inferior extremities, even at night. Pulse 80, and full; but he has been sitting near the fire; urine not diminished in quantity, but sometimes high coloured; appetite and belly natural; sometimes, however, has pyrosis and colic complaints. The swelling of his belly is of a month's standing; and was occasioned by a long march in bad weather, his feet being constantly wet. About a week after the first appearance of the swelling, his belly was much more enlarged than at present, and his legs were then considerably swelled. He had also at that time some pain in the right hypochondrium. The pain in the region of the liver, and the swellings of his legs, disappeared; and the size of his belly was diminished by the frequent repetition of cathartics. At present no pain is felt, nor can any hardness be perceived in the region of the liver. About a week before he set out upon his march he had the itch, for which he anointed himself with sulphur ointment.

4.

Inungr. Abdomen. m. et v. Ol. Cicut. Cap.

Pil. Merc. gr. x. om. noct. et gr. v. om. m.

Let him have a bit of meat for dinner, and an egg for supper.

5.

Rep^r. Pil. et hab. Liq. Punch ʒxij. quotidie.

Urine 40 ounces.

6.

Urine only 28 ounces ; no change of symptoms.

Rep^r. Med. 2^{da} quaq. hora ad 4^{ta}m usq. vicem.

Syr. Colchici ʒss. Incip. cras prim. mane.

7.

Urine 20 ounces ; has had but 3½ ounces of his medicine.

Rep^r. Pil. ad gr. xv. in die, et Syr. Colch. ad

ʒj. ad 4^{ta}m vicem, 2^{da} quaq. hor. ut ant.

8.

Urine 28 ounces ; pulse natural ; sleeps well ; no sensible effect from any of the medicines.

Rep^r. Syr. Colch. ad ʒj. ad sext. vicem. Incip.

cras mane.

9.

Three stools from the syrup to-day ; 36 ounces of urine, besides what was lost when he went to stool.

Omitt^r. Syr. Colch.

R. Rad. Scill. recent. ʒss. infund. in Vin. rub.

ʒxij.

℥xij. per horas 6. tum cola. Cap. ʒss. omn.
hora ad 4^{ta} vicem. Incip^t. cras prim. mane.

10.

Medicine purged him three times yesterday:
only 20 ounces of water measured; but the
greatest part could not be measured, owing to
the purging.

Omr. Vin. Rep^t. Ol. Cicut.

11.

Eight or nine stools yesterday; one stool to-
day; urine about 60 ounces.

R. Rad. Scill. recent. ʒij. infund. in Vin. Rub.

℥xij. per hor. 8. prius in frusta minuta seca,
cola; et cap^t. ʒss. 2^{da} quaque hora ad 4^{ta}
vicem, nisi Catharsis superv^t. Incip^t. prim.
mane.

12.

Urine about 80 ounces; vin. scill. of the ori-
ginal strength, the stronger not being ready;
breathing not affected.

Cap^t. statim Vin. Scill. ʒj. post. hor. 11. re-
pet. Cont^t. Pill.

13.

Urine 96 ounces; abdomen much flacker, and
less; no visible effect from the wine of to-day.

Cont^t. Med.

14.

Belly very much fallen; urine eight pounds.

Cont^t. Med. Omr. Pil.

15.

15.
Urine since yesterday only four pounds; belly considerably less.

Rep^r. Pil. ad gr. x. vesp. gr. v. mane. et Vin.
Scill. ad ʒj. 2^a quaque hora ad tertiam
vicem.

16.

Urine six pounds; belly continues to diminish; two thin stools last night; was a little sick on taking an ounce of his medicine.

Om^r. Gin-punch. Hab^t. Vin. Rub. ʒx. in
die. Rep^r. Pil. et Vin. Scill.

17.

Urine five pounds; mouth not affected; threw up the last dose of his medicine yesterday; has not been sick to-day; pain of his back still severe towards night.

App^r. Emplast. roborans lumbis prope part.
dolent. Rep^r. Med.

18.

Urine as yesterday; appearance of the abdomen quite natural; pain of his back very severe, so that he can neither walk or sit up.

Om^r. Pil. et Vin. Scill. Hab^t. Vin. Rub. ad
ʒx. in die.

19.

Pain of his back still severe; swelling of the abdomen still gone; urine four pounds; has
been

been costive these two days, and has some gripes;
breath never affected by the medicines.

R. Sal. Glaub. ʒij. Cryst. Tart. ʒss.; solv^r. ex
Aq. font. ʒxviij. et adde Aq. Cin. ten.
ʒij. Cap^t. ʒv. om. hor. donec alv. dejec.
Incip^t. statim. Inj^r. Enem. com. statim.

20.

Belly quite sleek; urine not measured; Gly-
ster and salts operated well; back rather easier.

Cap^t. Pulv. Cort. Peruv. ʒij. 3 in die ex Vin.

21.

Pain of his back removed, but he complains
of some pain of his left side; slept well; urine 24
ounces; belly natural; belly completely fallen.

Cont^r. Med.

22.

Free from complaint, except slight pain of his
side; urine not measured.

23.

Free from complaint; urine six pounds.

24.

Urine about six pounds; no complaint, but
slight pain of the back, and that not constant.

Rep^t. Cortex ad ʒj. quatuor in die, et Vin.
ut ant.

25.

Urine five pounds; no complaint, but slight
pain of the back.

Cont^r. Med.

26.

26.

Urine five pounds. Convale.

30.

Urine above five pounds; some fulness about the region of the stomach; good appetite, and belly natural; epistaxis sometimes, which he was formerly subject to.

Om^r. Cortex et Vin. Cont^r. former diet.

April 3.

Has had severe gripes, and great diarrhoea, since last report; complains of driness in his throat.

Bibat. Potionis Cretac. ʒiv. 4^{ta} quaque hora.

Incip^t. statim. Hab^t. Haust. Anod. c.

$\text{g}^{\text{ss.}}$ xxv. hor. fom. Cap^t cras mane Sal.

Glaub. ʒiſs. Cryst. Tart. ʒſs. ex Aq.

bull. lbj.

4.

Gripes and diarrhoea continued till this morning; gripes now gone; diarrhoea continues, seemingly from the physic; complains of thirst; but he slept well. Pulse 108; which it was yesterday.

Rep^t. Haust. Anod.

5.

Diarrhoea gone; pulse natural; abdomen swelled; fluctuation perceivable; urine five pounds.

6.

6.

Pulse about 90; he has been lately at the fire: urine about four pounds, though he drinks less than formerly: frequent epistaxis.

Rep^r. Vin. Scill. u. a. præscrip. ad 3fs. om.
hor. ad 5^{am} vicem. Incip^r. statim.

7.

Pulse natural; urine 2½ pounds; but he drinks little, having no thirst; belly natural; he slept ill these two nights.

Rep^r. Vin. Scill. ad 3j. om. hor. ad 4^{am} vicem, nisi prius nausea superv. Om^r. H. A.

8.

Urine three pounds; no sickness from the wine to-day; no change in the abdomen; pulse 72, and strong; he slept well.

Rep^r. Pil. Mercur. ad gr. x. mane et vespere.

Rep^r. Vin. Scill. cras ad 3j. ad 5^{am} vicem.

9.

Just as yesterday.

Contr. Med.

10.

Was made a little sick by his medicine yesterday, and was purged towards evening; pulse natural; urine four pounds; belly rather flacker.

Rep^r. Vin. Scill. et Pil. vesp. Om^r. Pil. mane.

11.

Urine 4½ pounds; no other change.

Contr. Med.

12.

Urine four pounds.

Rep^r. Med.

13.

Urine as formerly; no sensible change on the abdomen; complains of great sickness, vertigo, headach, thirst, want of appetite and sleep; considerable diarrhoea last night; tongue dry, but not foul; skin dry and hot.

Cap^t. hor. 4^{ta} P. Ipec. gr. xv. pro emet. et hab^t. Infus. Cham. mor. solit. Cap^t. 2^{da} q. hor. P. C. P. ℥ij. ex Vin. mixt. Incip^t. post Vomit. Hab^t. Vin. Rub. ℥j. c. Aq. font. ℔ss. in die. Fov^r. crura per hor. T. vesp.

14.

Pulse 138. Took one dose of the ipec. at four, and another at six; but threw up none till eight, and little then except what he immediately had taken down; was very much purged by his medicine; slept pretty well in the night, and had a slight moisture on his skin; soon after taking a dose of bark this morning, was seized with vomiting; threw up about three pounds, chiefly blood, and much of it very florid; headach continues; tongue foul, but moist; slight diarrhoea; little appetite.

Rep^r. Cortex ex Lact. Ebutyr.

R. Spir. Vit. ten. Syr. simp. aa ʒss. Aq. Rosar. ʒiij. M. Cap^t. coch. parv. 4^r in die, ex Aq. Vit.

Vit. vel Vin. ʒiij. Rep. Vin. mixt. ad ℥j.

15.

About 4 P. M. yesterday, became torpid and comatose, and never after spoke any; about four this morning, he had an involuntary discharge by stool, by which many pounds of blood were passed, some of it florid, some of it grumous and coagulated. A few minutes after, he died.

BETTY JACKSON, *Æt.* 26.

March 5. 1781.

Her legs and thighs are very considerably swelled, and leave the print of the finger on being pressed. The abdomen is very little swelled, nor can any fluctuation be perceived; about the region of the stomach there is some degree of fulness. She has, besides, much cough, and great dyspnœa, which obliges her to sleep with her head very much raised. Her sleep is disturbed, and she frequently awakes with a start. The swelling of the inferior extremities has continued for seven weeks: the cough is near of as many months standing; and, at its first commencement, was accompanied by considerable hæmoptoe. The cough and dyspnœa have, however, been much aggravated within these eleven days,

days, when she was delivered of a child at the full time. Four days after her delivery in this hospital, she was seized with pains all over the abdomen, and shooting to her back. These pains still continue; and were preceded by a fit of shivering, succeeded by heat and sweating. The lochia still flow; but are in very small quantity, and serous; in which condition they have been since the time of delivery. Milk in very small quantity; urine scanty, and high-coloured; belly loose, occasioned by the physic she got yesterday. She has had, for some time previous to delivery, at times, some tumour at the umbilicus. It has perfectly disappeared at present; but she says it is excited by severe coughing.

Inung^r. crura, femora, et abd. m. et v. Ol.
Cicut.

R. Pulv. Cryst. Tart. ʒj. f. hujus modi dof. x.
cap. iij. in die; Gin-punch ʒxij. in die.

A bit of meat for dinner, and an egg for supper.

6.

Pulse 96. Slept ill; but cannot lie down; complained of severe pains in the abdomen, and some sickness through the night, and to-day, since she took the medicines.

Cap. statim iij. dof. Cryst. Tart. et iij. iterum
post hor. 3. nisi prius alvus deject.

Inj. Enem. com. vesp. nisi prius, &c.

7.

Three doses were taken immediately, which operated in two hours. Two doses at 5, which operated at 7 p. m. Pulse 84. Skin cool; appetite bad.

R. Cryst. Tart. ʒij. Pulp. Prun. Gallic. ʒj.
Syr. q. s. ut fr. Elect. cujus cap^t. coch. parv.
2^a quaque hora, donec alv. dejec. Incip^t.
cras mane.

8.

Pulse 96. Electuary has operated three times; stools and urine passed insensibly; great stupor and delirium; swelling of the legs much diminished.

Appl^t. statim C. C. temporibus, et educat.
Sang. ʒviij. Abrad^t. Capill. quam primum
hora 6^a p. m.

No relief from the cupping and shaving; stupor and delirium continue; three loose stools (from the electuary) since one o'clock, all passed insensibly in bed; pulse 100, not very weak, but with great and frequent intermission; breathing somewhat laborious, and expectoration difficult and neglected.

Appl^t. statim Emp. Epispast. ampl. universo
capiti et sinapismi pedibus.

9.

Pulse this morning 84, at present 120; somewhat more distinct, but stools and urine voided

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insensibly;

insensibly; redness on the part where she lies; diarrhoea continued through the night.

Rep. Cryst. Tart. ad ʒj. 4^r in die. Omitt^r
Gin-punch.

R. Vin. Rub. ʒx. Aq. font. ʒvj. Pulv. Cort.
Peruv. ʒvj. Cap^r. ʒiij. 2^{da} quaque hora.
Rep. Sinapif. vespere.

10.

Speaks sensibly, but voids her urine and fæces insensibly in bed; swelling of the limbs much diminished; tongue clean; skin cool; pulse intermits every fifth stroke, about 80 in a minute.

Cont^r. Med.

11.

Died at 7 A. M.

Appearances on DISSECTION.

On opening the head, a morbid adhesion, of a very small extent, was found, of the dura mater to the os occipitis. It seemed to have been of long continuance; the vessels of that part being more numerous, and the membrane thickened somewhat. Below the dura mater, a small quantity of fluid was contained. The brain was perfectly sound; nor did the ventricles contain more than their natural quantity of fluids. All the viscera of the thorax were sound; but the pericardium contained eight ounces of water. In the abdomen two pounds of water were

were found. The viscera were all in their natural state; except the uterus, which still was much enlarged, and its inner surface a little inflamed; particularly about the os tinæ, where there appeared some effusion into the substance of the uterus. Within the uterus a considerable quantity of blood was contained. The external coat of the uterus was in no degree affected; neither were the peritoneum, or omentum and guts.

General OBSERVATIONS.

WE have contented ourselves with pointing out only a few cases of the unsuccessful and hurtful practice of physicians who follow the generally received plan, and with making such observations as arose from the circumstances of these cases very minutely described. Let these, therefore, serve as so many examples in fact of the impropriety of the practice, which is proposed to be exploded by the new doctrine. To have given as many as might have been collected, with corresponding observations on each, would have swollen this work to folios without end.

We have at the same time been careful to do all manner of justice to the practice which we have arraigned, by singling out the gentleman who is confessed to be the best of the ordinary practitioners whose practice we have had access to*. If the reader, however, should be desirous of further

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illustration

* Dr Gregory.

Illustration of this subject, by examining more instances of the common practice, we refer him to the registers of the Infirmary at large; and, besides these, to a practical work lately published, intitled, *Clinical Experiments*; by comparing which with the practice introduced by the new doctrine, he will have an opportunity to exercise his judgment and discernment of the truth.

We formerly gave a full description of the gout; and shewed it to be a disease depending upon debility, and to be cured by stimulating and invigorating powers. We asserted, that asthma was precisely of the same nature, from its arising from the same cause, and being cured by the same precise management. The same observation was applied to epilepsy, palsy, the greatest number of the cases denominated *apoplexy*, and to hysteria. It will also appear, from the view of local diarrhoea narrated above *, and the observations made on it †; from idiopathic diarrhoea ‡, and the observations following it §, and others on its cure §, that a case of disease, consisting of symptoms of indigestion, and particularly vomiting, sometimes with purging, sometimes without it, and sometimes with a costive belly, denominated *dyspepsia*, or *stomach-colic*, *diarrhoea*, or *looseness*, and *colic*; it will appear, I say,

* See page 188. † Page 192. ‡ Page 212.

§ Page 214. § Page 217.

say, that this case, so varied in its external appearance, is precisely of the same nature with those we have formerly described; and that they are all but one and the same general form of disease, the disease which we have denominated *asthenia*. Of the last-mentioned case we shall soon give an example or two in fuller illustration of the idea just now delivered.

But there are many other cases, supposed widely different from each other, and from the general form to which we refer them all, as constituting one and the same identical disease, differing only in the external appearance of some of the symptoms, which never amounts to any real difference, and in the degree of debility occurring in the several cases; most of these still remain to be taken notice of. Two of them, the inflammation appearing in the gout, and the inflammation, real or supposed, occurring in the course, and particularly towards the end, of typhus, have already been explained; and proved to be affections precisely of the same kind as the other symptoms, which are all symptoms of evident debility: they are therefore to be understood to belong to the cases of debility, which we have referred to general *asthenia*. And we expect, that enough has been said to incline the reader, contrary to the common opinion, to think they should be disposed in that manner.

Of those which we are now to add, intermittents have been mentioned as belonging to the same head of disease. But the hot fit, which is a distinguishing part in their course, has never been looked upon as depending upon debility. Its resemblance to the state of the body taking place in that phlogistic form of disease, has been the circumstance which chiefly misled physicians. They have at no time possessed so much philosophical turn, as to have been in any condition to discern false appearances from real states. On the contrary, their propensity to mark so many real differences of morbid state, as their histories furnished of apparent ones, has been the chief cause of the immense volumes of diagnostics, and, of late, of all the nosological distinctions, which have distorted the pathology, and perverted the practice of physic: A glaring example of which we have in the present case. But we assert, that the hot fit of intermittents is the same in kind with the cold one; differing only in this, that the debility, which is their common cause, undergoes some diminution in the hot fit, while at the same time it is still debility. The proof of this is incontrovertible. A state of debility constitutes the cold fit, which we are warranted to conclude from the whole concurrence of symptoms, as well as from the known debilitating effect of the several exciting powers; the consideration

deration of which, as our book is swelling in our hands, we must dispense with here, referring our reader to the new doctrine in which this fact is proved *. Another argument for the hot fit depending upon debility is, its being preceded by the cold one ; for, if the cold fit, as has been proved, depends upon debility, it is inconsistent with the nature of things that its effect will be increased action or excessive vigour, a state diametrically opposite to that which the cause is suited to produce. Physicians have had recourse here to their paradoxical notion, that the living system has a power, when the ordinary cause of excitement is diminished, to increase it, and produce it in a higher degree than the ordinary cause can do from its own internal energy. This idea has been sufficiently refuted †. It is a piece of Staahlianism set aside with the refutation of that doctrine ‡. Since, therefore, it is an imaginary property of the living system, it cannot be admitted in explanation of any real phænomenon, and is consequently inadequate to the explanation of the hot fit of intermittents. In the next place, if the hot fit of intermittents consisted in excessive action or vigour, it would be the same state with that which constitutes the phlogistic form of disease, and would be remediable by

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* Brown's Lect. El. Med. vi. xii. † El. Med. cxiv. to xcix.

‡ Elem. Med. Brun. and Brown's Lectures.

the same means of cure ; that is to say, a peripneumony, or the phlogistic disease accompanied with inflammation of the lungs, and the hot fit of intermittents, would yield to the same plan of cure.

But, I would ask any physician if that be the truth ? Are bleeding, purging, abstinence from meat and drink, and the use of every debilitating evacuator power, which are the remedies suited to remove peripneumony, also proper to carry off the hot fit of intermittents ? Nobody will say so. On the contrary, such a plan of cure would be found completely destructive, especially in the purest state of the disease as it occurs in warm countries. Nay, it is generally agreed among physicians, that, and only sometimes, with the exception of spring intermittents in a cold country, bleeding, which is the most powerful remedy to remove peripneumony *, is highly detrimental in intermittent fevers. The last argument we shall bring, is the effect of the remedies which have been found successful in the cure of this modification of disease. These are of late, the Peruvian bark ; and in former times, the several diffusible stimuli, as wine, &c. which operate by increasing excitement. Our conclusion from the two last arguments, therefore, is, That, since debilitating powers are hurtful, and stimulant

* El. Med. Brun, cccclxxii. to cccclxxvii.

lant ones effectual remedies against the hot fit of intermittents, they cannot depend upon increased, and consequently must arise from diminished, excitement; and from the same, as well as all the other arguments, the conclusion is irresistible, that the hot fit of intermittents is not different in kind from the other parts of the disease, but precisely the same with them, differing only in degree. If bleeding is hurtful, and the diffusible stimuli, when given in the time of the hot fit, as effectual as when they are given in the cold, which is an undeniable fact, there is no getting rid of the conclusion we have drawn. The hot fit, therefore, of intermittents, must now be understood as making nothing against the fundamental principle of the new doctrine.

Inflammatory congestions either arise, or are supposed to arise, in the course of intermittent fevers. These, by the Staahlans, were imputed to the use of the bark; by Boerhaave, to the premature use of it: And they both, as well as all their followers, and every writer or teacher, with whose doctrines we have any acquaintance, have all agreed that this affection is of an active phlogistic nature. But that opinion is sufficiently elided by a long train of facts which have since been detected. The simple state of which is, that it was not the bark which produced abdominal congestions, whether supposed or real; but the

the cause of the disease, suffered to go on, or increased, by the means employed for the cure of it. For the result of universal experience now, with respect to the use of the bark, is, that the more early it is administered, the more successful is its operation in removing the disease, and in preventing the occurrence of this as well as every other morbid affection. And we have further to add, that if ever the bark fails, which I have heard frequently happens, it is not from any tendency of its action to be hurtful, but from the insufficiency of that action. It is a much weaker stimulus than the diffusible ones, of which we have now made such frequent mention. Whenever, therefore, the cause of the disease rises to the height of producing such a violent state of it as occurs in the malignant intermittents and remittents of warm countries, in that case it is very injudicious, and incompatible with all the principles of our new doctrine, to trust the cure to it alone. As the debility in this is nearly the greatest that occurs in any case, the power of the remedies should be accommodated to that, and therefore the most diffusible stimuli employed, such as opium, &c. And after the system has, from the use of these, received a considerable increase of excitement, and is now raised to the state of this, in which the ordinary milder cases
of

of intermittent fever consists, then it is that recourse may be had to the bark, and other less diffusible, but more permanent, stimuli. Of this also we have proof from actual cures of obstinate intermittents performed upon this principle; of which I shall give a striking example. Two children, who lost both their parents in Lincolnshire Fens, were thence carried to Edinburgh, to be brought up and taken care of by a relation there: They had had the endemic fever of the first mentioned place hanging about them for many months, and were completely cured in a few days by the use of the diffusible stimuli.

From this and other instances that could be adduced, from the success of a near approach to intoxication employed by the country people, from the success of the practice of Riverius * by similar means, before the bark was discovered, and from the large analogy of the certain efficacy of this method of cure in all other cases of similar debility; we hesitate not to conclude, that the affection in the abdomen, whether taken, or mistaken, for congestion, though it may be inflammatory, is precisely the same in kind with the other symptoms, arises from the same debilitating powers, consists in the same state of debility, and is to be removed by the same stimulant remedies †. But we have proved above, that

* Brown's Lectures, and Cullen's. † Brown's Lect.

that all the other symptoms, not even excepting the state which constitutes the hot fit, are symptoms of debility. And the proof, which we have adduced of the inflammation of the gout, and of the supposed or real one occurring in the end of typhus, and of the hot fit in the febrile case we speak of, being asthenic symptoms, as well as all the rest constituting the respective cases, furnishes another analogy, that adds irresistible force to the conclusion we have drawn. From which our corollary is, That the abdominal congestions in intermittents, which have made such a noise in the books and the schools of physic, are either, like many others, an imaginary affection, or, if real, an inflammatory asthenic one. Consequently, instead of affording an argument against the fundamental proposition of the new doctrine, it gives a very powerful support to it.

X The appearance of the throat *, called from thence *gangrenous sore throat* †; and the similarity of painful feeling and inflammatory aspect in several larger joints, in the passive or chronic rheumatism, to symptoms similar in their appearance, but radically different in their nature, in active or acute; have proved another stumbling-block to physicians, by which they have been precipitated into an abyss of error, both in the patho-

* See above, page 131.

pathology and practice ; and from which their ignorance of the truth misled them into the belief, that these appearances afforded an insuperable objection to the fundamental principle of the new doctrine. But here again, as usual, they are all bewildered in the mazes of their own delusive conceit. The inflammation of the throat in the former case, and of the larger joints, or the parts in the neighbourhood of these, is as different from the corresponding inflammatory affection in the inflammatory sore throat and acute rheumatism, as any morbid affection can be from any other. In the present cases, it originates from the same exciting powers, consists in the same state of excitement, and is to be removed by the same degree of stimulus in the remedies, as all the other symptoms. In a word, the cause is debility ; and the indication of cure is stimulant operation ; which is the converse of the cases to which these are opposed. These last mentioned affections, therefore, are to be added to those which we have mentioned before, as so many corroborations of the new doctrine, and by no means raising any objection against it. Physicians, misled by their idea of the local part of the general affections we here speak of, have universally followed a plan of cure diametrically opposite to the one just now hinted. But their universal want of success, not to speak of the mischief

mischief arising from their practice, supplies an additional argument in favour of our last conclusion.

The cynanche tonsillaris, in the language of nosologists, in its first appearance, especially in young and robust persons, is very generally a phlogistic disease, and consequently such as is pretty well treated upon the common practice. But it is to be observed, that, after it has once happened to any person, it is very liable to return; and often with such obstinacy and frequency, as to chequer the patient's life with the alternate states of perfect health, and of a very painful and troublesome disease. While it is phlogistic at first, its after recurrence, for a period of time, in different cases, continues to be the same. But, in most cases, a period arrives, sooner or later, when the nature of the disease is totally changed. From the patient's caution to avoid the first form of his disease; and from the ignorance of physicians, so often pointed out in this work, of any other, and therefore their persevering in the plan of cure that only suited the first; the asthenic diathesis, or a state of universal debility, succeeds to the phlogistic, which is a state of morbid excess in vigour; and the phlogistic inflammation of the throat succeeds to the asthenic inflammation of the same part. Physicians, it would appear, never discerned that difference;

difference; and therefore they have, by a long and laborious process, converted the best into the worst constitutions. Nay, there are not wanting instances of death being the result of their practice, though the circumstances of the case were suited to bear up against a vast extent of improper practice. Every word that we have said on this subject, applies in a much higher degree to two cases, equally contrasted as those we have been speaking of, and equally understood by physicians to be the same, viz. rheumatism and rheumatgia: Which we passed over in a few words, reserving what we had to say upon the subject to what might occur in this place.

Acute Rheumatism is a most phlogistic disease, and therefore requires a sum total of debilitating powers, greater than ever was thought of before the new doctrine. But when that exquisite plan of cure is applied to it, it is removed in a few days. I have however known, what they took for the same disease, to last 40 years; during all which time the physicians took it for the acute rheumatism, and therefore plied the patient with bleeding, starving, and purging. The consequence of which was, that all the complaints increased in proportion to the progress of the method of cure, the pains became more general and more exquisite, and a diminution of all the faculties of mind and body ensued. The
loss

loss of voluntary motion amounted to that which constitutes formal palsy; nor did the involuntary motions escape the effect of the universal debility. This, as I have been informed, was the fate of a gentleman in this country of very considerable rank, who died several years ago, whose father is still alive, enjoying good health, about the age of 90, and who, if he had been properly managed, in all probability might have attained his father's age.

Ophthalmia, or inflammation of the eye, is commonly, in its first appearance, a phlogistic disease, and properly treated upon the ordinary practice. But there are cases of inflammation of the eye, which never are phlogistic: And the phlogistic case, according to what we said on the passive or asthenic inflammation of the throat, soon degenerates into the asthenic. But, while these diseases are so distinct from each other, physicians never observed any distinction in their method of cure. The asthenic ophthalmia, like the asthenic cases which we have been just now speaking of, is in every respect treated as a phlogistic. Our author has experienced both forms of this affection; and the result of that experience is, a confirmation of every thing we have said upon the distinction between active and passive, acute and chronic, phlogistic and asthenic, inflammation.

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We have now sufficiently explained the nature of inflammatory appearance; and to such physicians as have sense, instead of opening up a subject of controversy, we have laid before them a large view, and placed it in such a clear light, that they must intuitively discern it in its whole extent. At the same time, so simple is this view, so conformable to all the phænomena, so illustrative of all the inconsistencies and contradictions accompanying every other opinion hitherto entertained of the subject, that physicians must wonder it was not the first that occurred to the minds of observers. The reason for that, however, is evident. Physicians have seldom been engaged in observation, and seldomer in a train to derive any benefit from it. Useless particulars have been their only object of pursuit. They have skimmed upon the surface of things, without diving into the treasures lying hid below. Nature's uniformity was unknown to them. A supposed complication and incoherence in her works, was the only idea that guided them in their researches. Hence, with respect to that part of nature which belongs to their profession, simplicity and uniformity, connection and coherence, have been so little suspected, that, from the days of Celsus to the present, the most intelligent of the profession have considered it as altogether conjectural. This, however, could

not have been the state of the art, had its cultivators set out with the just and philosophical principle, which suggested the whole detail of the new doctrine, That nature is simple, uniform, and consistent; and had they inquired into every particular, viewed in that light, and compared it with other particulars, and these with others, till they rose to a general fact, and, from several of these, proceeded to an universal one. But no writer, no leader in the schools, either knew this to be the only road to improvement in the profession, or had it in their power to proceed in it. The inquiry into particulars, required time, and patience, and labour. It was repeated exercise in every one of the particulars, and considering each in every point of view, with a diligent comparison and adjustment of them, so as to bring out a fundamental and universal fact or principle, agreeing with each and all the particulars, to which each and all of these reciprocally applied, that promised either improvement or discovery. Such a discovery has been made, and precisely in the manner just now described. A previous inquiry into the whole detail of the phænomena of life *, has been instituted. Several particular facts have been carefully, painfully, and patiently compared with each other. General facts have been deduced

* See above, p. 116, to 118.

duced from these, and a universal or fundamental one from the general. The phlegmasiæ, or phlogistic diseases with inflammation, were first ascertained. After that, the phlogistic exanthemata were inquired into, and found to differ in no essential circumstance from them †. Our author's attention was next directed to the general diseases accompanied with a discharge of blood. These, contrary to the common opinion of their being phlogistic through their whole course, and therefore to that extent requiring the ordinary plan of practice, he discerned, and with a degree of doubt, which he has not yet determined, to be only phlogistic in their beginning; but, that afterwards, and perhaps even at first, they were purely asthenic. We have already observed the light, which his own experience on the gout ‡, and his observation on asthma, have thrown upon these diseases; proving them, as well as all the other cases, which were afterwards taken notice of, to be purely asthenic, contrary to every idea hitherto entertained by physicians. With these, in the progress of his inquiry and comparison, he discovered, that epilepsy, idiopathic apoplexy, palsy, hysteria, and idiopathic dropsy in all its forms, were to be conjoined ||. Lastly, he has given such an explanation of the phæno-

† El. Med. cxxx, to cccclxxi.

‡ See above. || See Prefat. ad El. Med.

phænomena, which we have been just now laying before the reader, as to shew their perfect conformity with his fundamental principle, and their inexplicability upon any other. The discovery of the hot fit of intermittents, and of the several asthenic inflammations, is now completed; and every embarrassment, which arose from all views hitherto taken of them, is now perfectly removed. In one word, so far as we have hitherto proceeded, not only has ample proof been brought, that there are a number of morbid affections, depending upon a cause hitherto unknown to physicians, viz. debility, but that these can be all united into one identical form of disease, in which no case differs from any other but in degree. The amount, therefore, of the whole is, that, while the phlogistic cases constitute one form*, the asthenic all unite to constitute another; and therefore there are only two diseases affecting the whole system: and that every thing else, which from the ignorance of physicians has been denominated *disease*, is only local affection. Which, as it essentially differs from the former, should also be distinguished from it by difference of appellation. But this nomenclature, though just and exact, and flowing from philosophical discrimination, will be as new to physicians as the view of the living system, which

* Elem. Med. and Brown's Lect.

which suggested it. They have talked of universal, general, and local diseases; but that was mere talk: The meaning of these words was unknown to them.

We shall now give a few other cases, which have also been supposed so many diseases, different from each other, as well as from those cases which we have proved to belong all to the same form of disease. We shall shew the error of that opinion; and prove, that the cases so judged of, are also all reducible to the general form we speak of.

There is a case of disease, the most frequent of all others, except the common cold, or *catarrh*, as it is called by physicians. It sometimes shews itself by complaints of the stomach, such as loss of appetite, loathing of food, nausea, and these arising sometimes to formal vomiting, accompanied with marks of inflation, and sometimes acute pain, in the region of the stomach. At other times, with more or less of the symptoms just-now described, it distinguishes itself by a loose belly, and gripes, and other uneasy feelings in the track of the intestines. It varies still further on other occasions, by shewing itself in the form of obstinate costiveness, with *borborigmi* as physicians call it, that is, a certain noise in the intestinal canal; and by pain more or less fixed, sometimes very

fixed and very severe. In the last case, vomiting often supervenes, sometimes bilious, at others stercoraceous. The most common seat of the fixed pain is above or within the upper part of the haunch-bone, by anatomists called *os ilium*. While that is the case, at the same time the seat of the pain is in the opposite side, where the great gut takes a sweep, or makes a turn, called the *sigmoid flexure* of the colon. With respect to these varied appearances, when the complaints are chiefly of the stomach, nosologists consider them as forming what they call a *genus* of disease, that is, a disease different in kind from any other; and many are the others which they suppose so different. To this genus they give the name of *dyspepsia* *. The concurrence of symptoms comprehended in the second part of our description, the same nosologists consider as another genus of disease, different from the last as well as from every other; and they give it the name of *diarrhæa* †.

In the part of the description, of which costiveness is a distinguishing symptom, they find another genus, likewise different from both the last mentioned, and from all others; to this they give the name of *colic* ‡. Further, when the vomiting, which we spoke of, supervenes upon the

* See Cullen's Sinop. 2d ed. G. xliii.

† Ibid. G. lvii.

‡ Ibid. G. lv.

the last mentioned concurrence, they consider the disease in this part of its progress to be very different from the preceding stage which they denominate colic ; and they call it an *ilius* *. And, from the appearances which present themselves on dissection, they tell you twenty idle stories about the state of the intestines within ; as if the situation of the part, produced by the full course of a disease which proved fatal, should be considered as the same with what took place in the commencement of the disease. They stop not here. For, when the fixed pain happens to invade the left side of the belly, in consequence of its cause affecting the great gut in the part which we have described ; from the vicinity of that part to the left kidney, they suppose this kidney to be the seat of the pain. And then, like a Proteus, or the effects of Morpheus upon the imagination in dreaming, the morbid case, which, under all these varied appearances, we shall prove to be one and the same, not only in itself, notwithstanding of these appearances, but with all the asthenic cases which we have hitherto taken notice of, is metamorphosed by the dreams of physicians into what they call a *nephritis calculosa* forsooth. Which is another genus, according to them, equally different from those we have related, and from all other genera of the sup-

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* See Cullen's Synop. G. lv. xix. Vid. ibid. Sauvag.

posed circle of diseases, differing *ad infinitum* according to their hopeful notions. Here we cannot help observing upon the present and every other part of medical philosophy, with a great philosopher in ethics, that "the whole is a riddle, an enigma, an inextricable mystery." But we go further than him when he adds, that "doubt, uncertainty, and suspense of judgment, appear to be the only result of our most accurate scrutiny into the subject." For we can demonstrate, with respect to the subject under our inquiry at present, that the whole is as diametrically opposite to truth, as incoherent conceptions, without exercise of judgment, reference to fact, or consistency among themselves, can be. If I know the truth, I can sit down and compose a proposition geometrically opposite to it, as a straight line is the rule by which we can only judge of the deviations from that direction which constitute a curve line. A person may be so bewildered, and so wrapped up in darkness, as to wander any given time, while he is at no great distance from his own house. In this state of aberration, he may be supposed sometimes to approach it, at others to recede from it, and therefore not always equally distant from the object of his pursuit. But, till the darkness is dispelled, and the objects around him illuminated, and consequently the one he is in quest of, nothing but mere chance

chance can conduct him to the place of his destination. But if the same person, in consequence of the false appearances which constantly present themselves to bewildered travellers, should suppose his house in a very different direction from that in which it is placed ; in this delusory state of his senses, he might wander to all eternity, and never get to his own house. This is the state of physicians in their inquiries after truth. They are lost in the utter darkness, or false light, of their imaginations ; and their approaches to truth are as little in their favour, as their aberrations from it. All this is well illustrated by the incoherent notions of physicians with respect to the present subject.

The case before us is one and the same. It is a modification of asthenia, originating from the powers that produce any other, consisting in the same state, and to be removed by the same remedies. It depends upon diminution of excitement, or a state of debility, occurring over the whole system, and predominant in the alimentary canal. Its indication of cure, therefore, is, as in every other case of asthenia, to invigorate the whole system ; and therefore the alimentary canal, as a part of that whole *. The remedies, therefore, to be employed, are the several stimulants, more or less diffusible, according to the degree

* El. Med. and Brown's Lectures, on Asthenia.

degree of prevalent debility. And we have further to observe, that as the part chiefly affected is directly acted upon by the most powerful of our remedies, their effect in restoring the state of health is proportionally more complete †. But it does not follow from this observation, that when the labouring part is out of the reach of contact with the remedies, these will therefore have no influence upon them. The contrary is the truth; as is every day evinced by the complete solution of peripneumony and idiopathic dropsy, from the use of remedies that act over all the system, though they come not into contact with the labouring parts ‡.

How widely different from this simple idea, so consonant with every other to the whole extent of the subject, so conformable to the fundamental proposition of our science, as we may now justly denominate it, ^{have been} ~~are~~ the notions of physicians, as we shall next shew, in their method of cure!

Upon inquiry into the state of the alimentary canal in this case of asthenia, it is found, that spasmodic and convulsive affection of that cavity constitutes the most distressing and painful symptoms that occur; as tormina, fixed and severe pain, &c. Both these affections depend

* El. Med. and Brown's Lectures on Asthenia.

† El. Med.

pend upon the general cause which we have assigned. But the former is produced by the co-operation of distension from indigested or feculent matter, but more especially from air. The latter is excited by a preternatural stimulus; such as may be afforded by an acid; which we know, in fact, is generated in weak stomachs. The state of the muscular fibres, acted upon by these powers, is a state of diminished tone and diminished density; what pathologists call *atony* and *relaxation*. These are in proportion to each other; because it has been proved, that the degree of tone is in proportion to the degree of excitement in the muscular fibres, and the degree of density in proportion to that*. There is no other way of explaining the known fact, that a given portion of muscular fibres in an animal will bear, without rupture, a force many times greater than the same portion of matter can bear after death, than by referring it to the state of excitement. With respect to muscular fibres, their excitement produces contraction, or a due tendency to this. The contraction, as well as the tendency, implies, that the constituent particles of the several fibres, so contracted, are brought nearer to each other, which is what we call their density, and thereby better fitted to resist any power that tends to disjoin them. In this way it is that the property of simple solids, to which

* El. Med. xlvii. to liii.

which we have given the name of *density*, implies a proportional degree of strength. To apply this to our present subject: When the muscular fibres distributed upon any cavity have their density diminished, that is, are in a state of laxity; and at the same time a distending power, such as the one we have mentioned, is applied to them; the effect is, that they yield more readily to it, than they would in a greater state of density. But as it is a property of muscular fibres, by which they are distinguished from all other bodies in nature, as well as from themselves in their dead state, to contract, in consequence of a stretching power being applied, and while it is applied*; it thence follows, that the muscular fibres, in the present case, when acted upon by the distending power, will first be stretched, in consequence of their relaxation, beyond their due dimension, and then contracted in proportional excess. And as this is a violent action, its effect is what we find upon every occasion to be the result of such violence, viz. pain. Lastly, as it is only in a certain measure of extension and contraction that the alternate contraction and relaxation of muscular fibres can take place, it follows, that, in this excessive state of extension and consequent contraction, the balance betwixt contraction and relaxation is destroyed;

* Haller. Elem. Phys. and Brown's Lectures.

destroyed: The contraction becomes excessive; and as its cause, the extension, or, in the present case, the distension, still remains, the effect, viz. the excessive contraction, must still remain.

The cause of this state of muscular fibres will, from what has been said above, readily occur to the reader. It is not, as physicians commonly suppose, an increased activity in the muscular fibres; which is what we call *increased excitement*, and what many physicians call an *increased influx** of the nervous power into the contracted muscular fibres; and therefore requiring, as its remedies, powers diminishing that influx, diminishing the energy of the nervous power, or, as we would say, impairing excitement. That is not the cause, nor is this the remedy. Let it be recollected, that the cause is already assigned; and that it is a diminution of excitement, and its consequences, atony and laxity of the muscular fibres, operated upon by a stretching or distending power. The indication of cure, therefore, flowing from this exposition of the cause, is, to increase the excitement of the muscular fibres, by which their tone and density may be increased, and they enabled to resist the effect of the stretching power in distending them to excess. This, and this alone, is the radical cure of these permanent contractions, which have, at all times of the profession, been denominated *spasm*. It might

* Cul. Lect.

+ for libility when applied to muscular fibers always implies a state of proportional atony and relaxation.

might here be thought, that removing the distending power might answer the same end. Which we deny: because, from the state of the case laid before our reader, though the distending power were removed, as well as the contraction more immediately excited by it, the muscular fibres would, however, still remain in the same state; that is, in a state of atony and laxity; which is the debility of muscular fibres, originating from diminution of excitement in them. Now, though, by an execution of the last-mentioned indication, the spasm should be removed, the disease, both of the part and of the rest of the system, would still remain; which is a state of diminished excitement in both, producing the several phenomena called disease. Nay, all this might happen, not only without the removal, but with an increase, of the disease. Accordingly, if by such a method of treatment as that we speak of, or any other, the state of the spasm in the alimentary canal should give way to that of palsy, and this to gangrene; would any person in his senses persuade himself that he had cured the disease and served his patient? The contrary is the plain truth. But it is a truth that physicians never could discern; as may be fairly concluded from their universal supposition of the seat of every disease being the part more strikingly affected, and from the direction of all their

their indications to the relief of that part. A conclusion that we draw from the above reasoning is, That the use of the carminatives, which were formerly employed to expel wind, though very proper to a certain extent, was introduced upon a very false theory. They were supposed to possess a property of driving the air before them. But they acted not upon the air. They were stimulant; and, by increasing excitement in the muscular fibres, they enabled them to resist the distension of the air, and to diminish the enormous contraction arising from that distension; that is, to remove the spasm, and restore the natural contractions alternating with relaxation. Another idea has prevailed long, and which it is impossible to drive out of the noddles of the ordinary practitioners. It is, a supposition that emetics and purgatives have a property of dislodging from the alimentary canal all its hurtful contents, and among the rest pent up air. But this, from all that has been said upon the subject, it must appear, is a very great mistake. Vomiting and purging, especially when induced by the trash called emetics and cathartics, are most debilitating powers, as we have more than once had occasion to observe. As such, they are excellent remedies in the several cases of the phlogistic form of disease. But, for that very reason, among others which we have formerly taken

taken notice of, they are detrimental, and may be pernicious, in every case of the asthenic form. In the present case, they increase the debility of the whole system, and the laxity and atony of the morbidly contracted fibres. And if ever spasm yielded to their operation, it was owing to that operation increasing the debility to a higher degree than that which is compatible with spasm; and therefore their only effect was an increase of the disease. Bleeding has also been employed with the intention of removing a spasm; and with the same effect as purging and vomiting, that of increasing the debility upon which the disease depends.

The convulsive state of the alimentary canal is owing to the same state of the fibres that produces spasm. But the exciting power, instead of distension, is a preternatural stimulus, applied to the fibres in their weakened state. Thus, often in *dyspepsia* as it is called, and constantly in cholera, a very concentrated acid is generated in the stomach; so concentrated, as, when rejected by vomiting, to corrode vegetable matter. Any degree of such a stimulus as this, applied to the fibres in the state of weakness which we have described, could not fail to throw them into very irregular and enormous contractions. These contractions exhibit an appearance of increased vigour; and therefore physicians have referred

referred them to the cause mentioned above. We will not contend with them about the degree of contraction that takes place. And, with respect to both spasm and convulsion, we have only to observe, that, whatever be the state of contraction in them, their function of contraction, considered as sound, is an impaired one: which is proved by the arguments which we have already often repeated. Spasm and convulsion never take place but in a disease of debility. All the other symptoms accompanying them are evidently such. Debilitating remedies, which increase the other symptoms, also increase them; and stimulant ones, which, according to their degree, relieve and remove the other symptoms, relieve and remove them. The indication of cure, therefore, in convulsion as well as in spasm, is, to increase excitement over the whole system, and therefore in the contracted convulsed fibres. In consequence of which, as in the former case the distending power, so in the latter the preternatural stimulus, is carried off. But, in this case of convulsion, diluents and demulcents have only been thought of as remedies, and opium to relieve pain. To the former we have no great objection; because a moderate quantity of watery fluid, and of those substances which are called demulcents, may possibly be blended with

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the acrid offensive matter, and, by diffusing or inviscating it in their mass, break its force; and at any rate they can do little harm. But they contribute nothing to a natural cure. For, though what can be easily granted should happen, viz. that the acrid matter is carried off by the use of these articles, the state of the fibres in the part, and the state of excitement over all, and therefore the disease, still remain. We must here therefore, as well as in the former case, and in every case of debility, have recourse to the indication of cure so often repeated; that is, to increase the excitement over all, and therefore in the part more especially affected. We have said, that the several appearances of seeming, but not real, difference in the alimentary canal, mistaken by physicians for so many different genera of disease, are one and the same case, and precisely the same with every other modification of asthenia. This we could prove by an hundred examples of cases successfully treated upon the principles of this doctrine. But we shall content ourselves with two.

A GENTLEMAN, of a thin habit of body, extremely temperate, after exposure to cold, and subjection to a more sparing diet than was even usual to him, was suddenly seized, early in the morning,

morning, with a violent, acute, and intolerable pain in the region of the colon. The first surgeon of the place was called; who immediately bled him, nearly *ad deliquium*. The pain abated, and he was easier during that day. His brother, who was then a pupil of Dr Brown's, and living with him near Edinburgh, had occasion to go into town with the Doctor that day. Upon calling upon his brother, he was informed of what happened; and, as he was then asleep, and seemingly easy, the family formed the most sanguine hopes from the profuse bleeding. Dr Brown was immediately informed of the case by his pupil, who seemed to think that it greatly invalidated the Doctor's new doctrines. Dr Brown declared, that although the bleeding had given him temporary relief, all the symptoms, unless an opposite treatment was instantly ordered, would return, and perhaps might prove fatal. This also was the opinion of his pupil. But he could not, however, upon reflecting, think of daring to oppose his opinion to that of so notable a practitioner; and the more so that his brother seemed at that time easy. The very next day, however, shewed that Dr Brown's prognosis was not the result of conjecture and the product of chance, but that it proceeded from a just estimation of the laws of the animal œconomy. Every thing that he predicted actually took place. All

the symptoms increased to an enormous degree. The pain became intolerable ; which was further aggravated by the violent vomiting and frequent loose stools, with great prostration of strength. Two eminent physicians next were called : who plied the patient with emetics, cathartics, and diuretics ; and further reduced him by an absolute denial of wine, and of every thing that could support him under this rapid progress of debility. The patient found himself verging towards his final dissolution. He was thrown upon the bed in an expiring posture. His brother found him in such a deplorable situation, that he was determined, without loss of time, at all hazards, to employ Dr Brown's practice in its fullest extent. He accordingly instantly gave him 100 drops of laudanum in a large punch-glass of double cinnamon-water. This stopped the whole rage of the disease in five minutes. Next morning, at six, he gave him a large breakfast-bowl full of port-wine, boiled with different spices. A few hours after, a zealous pupil of the university, a warm friend of the patient, coming in, and being informed by the latter what had been done, exclaimed against the practice, and informed the surgeon of what had been done. The relief which the patient had received was both so sudden and complete, that he was not to be excluded from the benefit of a plan of cure, of the propriety

propriety of which, and of the pernicious tendency of the one recommended, his feelings and experience gave him the most ample evidence, by the unfolicited interference of any gentleman. He continued that day, therefore, the use of cinnamon-water and beef-tea. Next day he continued perfectly easy. The following day he was persuaded by his physicians to have another injection. But he was like to have paid dear for his compliance. A relapse, more serious than the former, followed. He was glad again to have recourse to his brother; who prescribed 120 grains of laudanum, with 25 grains of vol. alkali, in three ounces of double cinnamon-water. By this, and the use of good Madeira, with opiates, he recovered so completely, that he could be supported by animal food, and a moderate proportion of sound wine after each meal. A twelvemonth has elapsed since this cure, without the least tendency to a return of the disease. This cure can be vouched by the patient himself, by his brother who executed it, and by the rest of a family whose truth and integrity none will dare to call in question. They have a large circle of respectable friends; and have thought it incumbent upon them, as a duty they owed to truth, to take every opportunity of asserting, that this gentleman was saved upon the principles of the new doctrine, and the patient snatched from the

drops

of death, in which he had been placed by the practice of those who are the leaders of medical doctrine.

THE reader may here remark what a degree of resolution and firmness our young practitioner would have occasion for in opposing alone his practice to that of so many names of the first distinction, and how strong his conviction of its propriety must have been, when he did not suffer the influence, the intrigue, and the artifice of such personages, to sway him from his fixed purpose. If his brother had died, his death would have been charged upon him, the reader will guess by whom. But, such is their versatility, that, finding the cure too glaring to be disputed, and recollecting that there could be as little doubt of the pernicious tendency of their practice, they changed their ground. And, because they had administered a little opiate in an injection, and their equal insignificant dose by the mouth, they had the impudence to give out to their friends, and to induce their understrappers to spread a report, that, since it was by opiates that the cure was effected, and they had given an opiate in the manner just now mentioned, there was therefore no difference betwixt their plan of cure and the effectual one. But let it be observed once for all, that this is a villanous, deliberate falsehood, and within themselves they know it to be so.

Whatever

Whatever were the contents of their injections, the reader will clearly discern, that, instead of contributing to the cure, they manifestly increased the disease. Bleeding, vomiting, purging, and glystering, are highly debilitating powers, as I have repeatedly observed. This disease, as we have proved, and as its cure by the use of the most stimulant powers will evince to every one, was a disease of debility. The true amount of their indication of cure was, to remove a disease consisting in a state of debility, by increasing debility to an enormous degree.

It is in vain for them to pretend, that the useless proportion of laudanum which they administered could in any shape place their plan of cure upon the same footing with the other. The state of the patient, after a full course of their plan, compared with that which was produced by the first exhibition of the remedies upon the other, and steadily supported ever after, unless when they interfered by ordering their last injection, gives the loud lie to the vile report, which was so industriously and maliciously propagated.

THE other case we have to mention is that of an old lady. She had for the space of a month laboured under symptoms of crudity, indigestion, and irregularity of her belly. At last her stomach complaints increased to the degree of very

frequent vomiting for two days. On the third, the vomiting became enormous, and almost perpetual. Dr Brown was sent for, and by a moderate share of laudanum, and less than three glasses of spirits, stemmed the whole tumult within three hours. He took a longer time with this cure; because, from the lady's advanced age and delicacy of constitution, and from the raging disposition to vomiting, he was aware that a large dose of laudanum might not be kept upon the stomach. He chose, therefore, to proceed piecemeal: And as he expected two or three attacks after the first exhibition of his remedies, which accordingly happened, he followed every one of them with a new dose. He predicted all this to the family; and, after the third vomiting, told them the work was finished. He left the patient in a state of happiness, the feeling of which was increased by her comparison of it with her former state: ordering her to be dosed, before she went to sleep, with negus, and, when she awakened through the night, to take half a glassful of spirits and a quantity of beef-tea; and to observe the same conduct the next day, till he should call upon her. This last part of his directions, however, was altogether omitted; from a persuasion in the patient, and in a female friend who attended her, that the cure needed no further support; and from a fear that the
spirit

spirit might fly to her head, and make her hot. Accordingly, when the Doctor returned, he found the patient so weak, that she could hardly speak to him, to tell him that she had not vomited, but with great difficulty had kept herself from it all the forenoon. He reprimanded her gently; and begged she would not oppose a mixture of womanish and medical prejudices, to the conviction which this happy cure must have produced in her own mind of its propriety. He told her, that the remedy, instead of heating her, would cool her; and, instead of producing head-ach, would remove every degree of it, that she might be labouring under. He insisted upon her taking a small glassful. She did so. And in less than two minutes, the Doctor, perceiving her to talk in a strong and healthy tone, desired her friend to turn her attention to what had happened. She did so; and perceived her to be greatly recruited by the cordial: And the patient herself confessed, that it had every effect which he had foretold. Her strength was restored; her skin cooled; her headach removed: And she assured him in a tone of emphasis, that she would never for the future depart a hair's-breadth from his directions. They were consequently all complied with through the following night and next day, and the patient's health confirmed.

Her

Her gratitude, and that of the family, has been amply testified by their taking every opportunity, among all their numerous acquaintances, by every one of whom they are justly respected for their worth and integrity, of confessing, that the Doctor's merit to this lady was no less than that of saving her life. This case of disease has met him more frequently than any other in the course of his practice; and he has always had the happiness to treat it in the same successful manner. It is to be hoped, after pointing out the pernicious tendency of the common practice in it, and the equally simple and salutary one deduced from the new doctrine, that the eyes of both patients and practitioners will be opened to a truth, in which the health of the former, and the credit and reputation of the latter, are so deeply interested. If the particulars of the detail which we have given, be candidly weighed and examined, it is impossible that the intrigues and artifices of the common practitioners, or any false estimation of interest, should continue to preponderate against the common sense of mankind, appealed to in a matter that deeply affects their most important interests.

We now proceed to give, as an example of febrile cases being precisely the same disease with those of which we have already given an account, the case which we formerly commented upon,

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as it was taken by me long before any dispute arose, or could be foreseen to arise about it *.

A GENTLEMAN, aged 20, of a slender make and delicate habit of body, from much confinement to study, perfect inattention to an invigorating diet, accompanied with dyspeptic symptoms, suddenly perceived a great weakness in his right shoulder, which was soon followed by a total incapacity to perform any business with it, and soon after by a complete dislocation. In this state he remained for several months, having consulted all the more eminent practitioners without relief. His humerus was obliged to be supported in its natural position, or a complete dislocation instantly supervened. This was the condition and state of his shoulder, when it was accidentally mentioned to a gentleman †, who luckily considered it as a general and not a local disease; in which latter light it had been universally considered. His plan of diet was totally altered, from low, to the most invigorating. He was ordered to promote his appetite, which was bad, by a more than common relapse from study, a constant attention to moderate exercise, and equilibrium in point of temperature: to which was added, an injunction to refrain from the cold bath; and, if he used it at all, to use it

* See page 133. to 149.

† Doctor Brown.

topically. From this plan a perceptible increase of vigour instantly accrued, (though, the day before these directions were given, a dislocation, from inadvertence to support the arm, had happened); and in less than a month or five weeks, a degree of vigour not much inferior to the other arm took place. The muscles which surrounded the joint were, however, diminished considerably in bulk. This happy prospect was but of short duration. One day lately, having used the cold bath, from which he went to see a patient in a typhus, in a short space of time after, he perceived an evident prostration of strength and languor. To remedy which, he had recourse to the cold bath the next day. From this period, the greatest debility, with intolerable headach, supervened, to so great a degree as to threaten delirium. Emet. Tart. in small quantity was administered at this period *, when a friend called upon him, and ordered its discontinuance. This was myself. In place of which, the free use of wine was prescribed; together with a draught or two in the night, as occasion suggested; the composition of which was 35 drops of laud. and 20 of vol. alk. For three or four days this practice was continued, with the occasional administration of a clyster of milk and water; and with such success as flattered with the most sanguine hopes of soon removing the disease. Unfortunately

* The third day of the disease.

nately a physician was called in (viz. 7th day); who, being rather dubious as to its nature, advised some emet. tart. to which the patient would not consent. The draughts, however, were continued for a night or two, without any advice from the physician, but always with relief. A nurse being called in, obliged their being discontinued; and in short, every thing, unless ordered by the physician. His quantity of wine, from three pints or more, was reduced to one, and less, in the day. From this time till the 15th day, the disease made a most alarming progress. This day a total incapacity of speech, and for taking any nourishment, unless by a tea-spoon, supervened; together with perfect restlessness, and want of sleep, for 48 or 50 hours. His pulse 105. All hopes of recovery altogether ceased on this occasion, as well among the physicians as nurses; when 100 drops of laudanum, in two separate doses immediately after each other, were thrown in (12 a. m.) In less than four hours after, rest and refreshing sleep supervened. At 7 p. m. his pulse was reduced to 90. The laudanum was continued with the wine in large doses through the night: and in the morning after, there was not the least degree of fever; his senses were perfect, and his speech returned. The nurse, relying upon this disappearance of bad symptoms, omitted the laudanum, and gave little

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or no wine for that day and the following night; on which great delirium happened during that and the night following. Wine was given during this interval, but in too sparing a quantity. Great coldness of the extremities took place, arising from the feet to the pelvis, (viz. Sunday and Monday last). In this dilemma strong cinnamon water was given (Monday), and he was ordered (by me) to be wrapt in warm flannel during the day and night; which recovered his heat and senses so remarkably, that he has not relapsed in either, and continued well ever since.

Monday, November 13. 1780.

IN this case, the progress of debility towards delirium, when increased by the ordinary evacuant and debilitating plan of cure, and the other symptoms of morbid affection of the head, which have been imputed to inflammation within the cranium, must be very conspicuous to every one; and the prevention or removal of that affection by a very liberal use of the most diffusible powers, will be equally evident. But all this is reversing the common opinion; according to which it is supposed, that excessive action occasions that formidable affection, and consequently that diminishing that must prove the cure. This is another instance, and of the highest consequence, of physicians never having had an idea of asthenic inflam-

inflammation. The affection here was removed by the use of wine: But it would have been much more quickly removed had the wine, according to Dr Brown's direction, been administered more plentifully, and supported by other, and more powerful, stimulants.

By the same plan of cure, viz. the use of highly diffusible stimulants, Dr Stevens cured a putrid fever in the Grass-market, in a few days. The stimulant upon which he chiefly depended at first, was musk: But, finding the circumstances of the patient inadequate to the price of it, he afterwards desisted from its use, and employed opiates and vinous draughts. Dr Brown himself saw this case twice or thrice.

Another case of putrid fever, which Dr Brown and Dr Stevens both saw, was, by the same management, so far removed in 24 hours, that the woman scrupled not to engage herself in the laborious work of washing. This exertion, however, exceeded her powers, and produced a return of the disease: Which was completely removed in nearly the same space of time. Let the febrile cases which we have given, suffice for an example of many more that might be given, of the happy effects of the new doctrine in a set of diseases, in which the common practice is well known to be not only impotent but pernicious.

T H O.

THOMAS COLLINS, *Æt.* 25.

July 15.

COMPLAINS of extreme pain and sense of weight in his head, with universal languor and debility. His face is somewhat flushed; skin very hot; tongue very foul, and dry; pulse 106; belly regular. His complaints attacked him suddenly, when upon guard, with chilliness and shivering, followed by intense heat and the other symptoms, which still continue unabated. Knows no cause for his complaints.

Appf. C. C. tempor. utriq. Foveantur crura.

Toast and water for common drink.

16.

Head much relieved; tongue foul, with considerable thirst; belly free; tickling cough at times; pulse about 116, regular, full, and soft.

Hab. Julap. Salin. ʒiij. omni bihorio.

A bed-chair and a nurse.

17.

A good night, but delirious since morning; thirst increased; belly regular; pulse about 120, and feeble; inclined to sleep.

Hab. Vin. Rubri ʒj. omni hora.

18.

A bad night, with delirium; frequent loose watery

watery stools. Pulse above 120, soft, and rather firmer; tongue cleaner; thirst continues.

R. Calx. Antim. Nitr. gr. x. Conserv. Ros.

q. s. ut f. bolus, omni bihorio ad 5^{am} vicem, nisi prius edatur aliquis effectus, sumend. Hab^t. Aq. Card. ℥ij. omni bihorio. Om^t. Vin.

Hora 9^{am} p. m. Pulse hardly perceptible; hands and feet cold, with involuntary startings and laborious breathing; eyes seemingly fixed.

R. Spir. Vin. Gall. ℥viij. Cap^t. ℥ij. omni hora ex Aq. ℥iv.

19.

Previous to the use of the spirits and water, had taken three of the boluses. The looseness which had continued was considerably increased towards evening; no other sensible effect from the boluses. Towards 10 at night, pulse was become firmer, the involuntary startings gone, and his looks much amended. The free use of spirits and water was continued: slept tolerably, with less delirium; had several more loose stools through the night, and another since; is at present under a sweat; thirst abated; free of complaints. Pulse 84.

Cont^t. Aq. Card.

20.

A tolerable night, without delirium; thirst moderate; belly regular. Pulse about 84.

Z

Cont^t.

Cont'. Aq. Card.

21.

Hab'. om. mane Pulv. Rhæi gr. vj.

Table-broth, with rice-pudding, for dinner.

23.

Omit'. Pulv. Rhæi.

Dismissed cured.

IN the last febrile cases, illustrations were given of the happy application of the new doctrine to the phænomena of the diseases called *fevers*. But in this case the reader has an opportunity of discovering its high importance in attracting the attention of a practitioner who had never been imbued with it. For the first three days, he did not recede much from the common practice; and his good sense enabled him to discover, from the increasing frequency of the pulse, and the supervention of other bad symptoms, that the disease was increasing, with bad hopes of the event. He immediately found it necessary to change his plan, and to have recourse to the most powerful diffusible stimulants. The event justified his expectation. He made such a cure of a bad case of fever, as I suppose never was made in that house before. This gentleman dismissed his patient cured; but we cannot dismiss him without rendering him the tribute of praise due to his candour and judgment for supergrading

ding the prejudices of his education, and preferring a persecuted doctrine, because he saw it salutary, to a pernicious one, though protected by the united influence and authority of the leaders of medical doctrine in the place. We think it not fair to conceal his name. The author of this happy cure is Dr James Hamilton, one of the physicians of the Royal Infirmary of Edinburgh. And we hope, for the good of the poor, who are the subjects of medical practice in that place, for the instruction of the students, and consequently the more general good of society, that the example which he has set will be followed by his colleagues, whether clinical or ordinary; and that he will have the honour of having introduced, and seen carried into execution, a complete revolution of the medical art in the chief nursery of its practical part in Scotland.

We shall now finish our exposition of cases, whether as exhibiting practice of a hurtful or pernicious tendency, by observing, that, in treating of the morbid affection of the alimentary canal, the nature and cure of which we fully explained, but thought it not of consequence to give it any denomination; we should there have mentioned some cases of the same nature, where the vomiting was assiduous, and the pains accompanying the affection excruciating to distraction, which

were cured by Dr Stevens, within this fortnight, by such an abundant use of the most powerful and penetrating diffusible stimuli, as would astonish, I suppose, all the physicians upon earth, except those persons who are acquainted with the doctrine which holds forth to mankind such effectual and salutary cures.

After the very full view that we have given of medicine, both in its erroneous and newly reformed state, we think it not necessary any longer to detain our readers with further particulars; hoping we have done enough to obtain the assent of the judicious and unprejudiced part of them. We had not the vanity to pretend to make an impression upon those of a contrary description. Error and prejudice, at eternal variance with sound sense and candour, will, under many circumstances favourable to them, often take their full swing in common life; and they will often, for a time, preponderate in the scale against the most certain and important truth. But as darkness, or delusive and false light, constantly surrounds their habitation; while the light beam-
ing from truth displays her in her just colours, features, and proportions; hence it happens, that though the former, by bewildering the steps and dazzling the eyes of the beholders, may for a time conceal their true nature; the latter will need only the pains necessary to the research of
her,

her, and to a comparison of her with them, to beget conviction. Who, after wandering in the dark by a Jack-and-lanthorn, when the day dawns, and the sun rises upon him, would hesitate a moment in discerning the true from the false light? As it is therefore to be hoped, that error and prejudice, however much favoured by many present circumstances, upheld by folly, and protected by authority and influence, will at last, and within no great space of time, totally vanish before the truth, as the false light we have just now mentioned disappears before the rays of the sun; in the mean time, however, they are the fiends which surround the truth, and avert her visitants from the avenues leading to her mansion. They are like the spirits with their shining swords every way guarding the tree of life, and excluding man, after the denunciation of the curse against him, from all access to it. But the author of this great discovery has not only to combat the fiends we have mentioned, error and prejudice, supported on the one hand by folly, on the other by influence and authority: To the latter is superadded interest, ingendering intrigue, cabal, and all the dæmons of detraction and calumny. This is the army raised against him. But, strong as it is in numbers and in hostile arts, its legions arrange not themselves openly against him, they venture not

into the fair field. The plan of the war which they only can trust to, is ambush and surprise; and its only object is, the secret destruction of the adversary. Malice and fear are their motives: To gratify these, they are willing to resign the glories of avowed victory. Against forces so powerful and formidable he stands, with plain truth, and the adherents he has gained, by his side. For such a cause, and with such auxiliaries, he maintains the conflict; he gains ground on his enemies; and he cherishes the hope that he shall be able to storm their inmost and strongest fortresses, and plant upon their highest tower his banner of truth.

To come to plainer language: There is a junto of men in Edinburgh, who at all times, from fear of his learning and abilities, have been his determined enemies; and, by all arts but good ones, have uniformly fought his ruin, and that of a large and innocent family depending upon him. This conduct, first of all, was the return they made him for great services done to them as a body, and to certain individuals of them as friends. Their open conduct to him was friendly; their secret a plot, a dark Catalinian conspiracy. Accordingly his suspicion of it was late, and the full detection later. He found himself stabbed in the dark: And the daggers were poisoned; but he saw not the hands which directed them. His judge-

ment, however, at last came to supply the place of information, by comparing one part of their conduct with another. His attention and observation provided him with a faithful thread, which guided him through the whole labyrinth. From that time he thought it both safer and more honest to pursue such a plan of conduct, as the British ministry have since done with the Dutch. He chose to tear off the mask of their pretended friendship, and convert these secret enemies into public ones. After forming this resolution, the first step he thought proper to take, was to make application for being made a member of a certain literary society *, to which no man's petition had ever been rejected either before or since; foreseeing that he would be rejected. This accordingly happened. But before it happened, he was by one of themselves informed, that the conspirators were at work; and advised by him as a friend, to withdraw his letter of application. A frivolous and false cause was assigned for the opposition. The informer and friendly monitor, who had perceived that our author had a new doctrine of medicine in meditation, began, as it would appear, to fear that it might terminate in the extinction of one which he assumes as his own; and, as if there had been no errors in the medical de-

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* Philosophical Society,

partment to explode, but his, or those of the patched-up system which he lays claim to, he had the vanity to think, that the sole or chief intention of this new medical fabric was to batter down his. He was, therefore, the prime mover of the plot, as could be proved by many circumstances, with which it is unnecessary to trouble our readers. Whether he had hoped to succeed in the part which at this time he was acting, and was therefore disappointed in the answer he received, is only known to himself. But that answer was, in a tone of firmness, that the application would not be withdrawn; that the applier had long had reason to entertain suspicions both of him, and a set of men connected with him; and that he was resolved to make their present conduct with respect to him, the criterion of his judgment of their intentions towards him: they might therefore do their best or their worst; for his admission into that society, however respectable some of them were, considering the characters of others, was a matter of perfect indifference to him. The plot succeeded: And the next step to be taken was to employ every engine to deceive the injured person into a belief, that this gentleman at least had been his friend. Their next step of conduct to him, was to fill the ears of students with every vile insinuation that could tend to ruin his character,

racter, either as a man or as a physician, or as a
 public teacher of medicine. And in that they suc-
 ceeded but too well. They had nearly completed
 his ruin, by procuring almost every medical
 practitioner in the place, to hurt him, as far as
 their calumnies, united with their own, might
 effect. Amidst such an universal uproar against
 a single individual, who was supported by nothing
 but the effect that his lectures might have upon
 young minds, deeply preoccupied by prejudices,
 and many of them roused to rage against him
 personally; and this for no other reason, for-
 sooth, but differing in opinion from the authors
 of his persecution; and with shame I acknow-
 ledge, that I myself, with many other good friends,
 who are now complete converts to the per-
 secuted doctrine, were in the number of those
 who had been so abused: Amidst all this, the
 doctrine delivered in successive courses of lectures,
 began gradually to gain ground, and propor-
 tionally to prevail over the artifices so employed
 to suppress it. Its adherents of late have been
 respectable, and promise to be more so every
 day. It is needless to mention the intriguing
 and bustle, and intemperance of language, that
 have been employed against it in the Medical
 Society; where the chairs were filled, and a ma-
 jority of voices procured, by the influence of
 the same men, and for the same base end; as if
 truth,

truth, supported by reason and fact, could cease to be truth, from the suffrages of ignorant and deluded boys. A society has lately been instituted in the place, which, from the candid, judicious, and impartial conduct of its noble founder, in filling it with the most respectable and distinguished names at home and abroad, and in cautiously fencing it against the encroachments of those freezers of freedom of thought, those suppressors of all improvement in every department of knowledge, those craftsmen, who impudently arrogate to themselves the exclusive right of converting all the arts and sciences into a machine of gain to themselves, will certainly do honour to the kingdom, if their intrigues could be kept out of it. Our author, without any personal acquaintance with the chairman and the several members, and from the sole consideration of his literature, was, without application and without his knowledge, chosen their Latin secretary. This could not but prove galling to a junto of men so earnestly set on his destruction. They have accordingly had recourse to their usual artifices, not only to procure seats in it, but to obtain direction in certain departments of its management: And no doubt one of their objects is, to hunt the Latin secretary out of this asylum.

In the fore-part of the book, we have given a
full

full history of an attempt made by two physicians to banish our author from the practice; and we have placed their conduct in its proper light. But since that time, when the fame of his practice had, among other places, extended to a family, the master of which was labouring under a dangerous disease; and when the Doctor had been actually applied to, to consult with the ordinary physician, who was a professor, and therefore one in the catalogue of his enemies; this personage had the littleness of mind to go before the time destined for the meeting, and persuade the family to countermand the appointment.

In order more effectually to subjugate the students to their interested purposes, by certain innuendos and ambiguous expressions, they gave birth to a report which spread through the body of the students, that those of the students who had become converts to the new doctrine, and indeed every person indiscriminately who heard it, would be severely handled on their trials. This operated powerfully upon the minds of many who had never subscribed to the new doctrine, as well as upon some friends to it, whose relations insisted upon their taking their degree at Edinburgh. At first it had its effect in diminishing the numbers of our author's hearers. But it is difficult, when truth and honesty are once given up, to insure the advantages which, sooner or later

later, naturally flow from the known practice of them. Detection is almost always the certain result of the multiplied modes in which they are counterfeited. This illiberal report, which ought not to have originated from the cause we have mentioned, and which those whom it most concerned ought, for their own honour, to have suppressed, was, however, cherished by them, seeing it the most powerful engine by which they might accomplish their favourite project. Honesty, however, is the best policy; and truth is the brazen wall of defence to its possessor. They justified the report, by repeated partiality upon examinations; in admitting the most ignorant and illiterate to degrees, because they had been subservient to their purpose; and in rejecting those of a contrary description. Some years ago, they had passed three gentlemen who had befriended the new doctrine. Their plan then had not been laid so deep. They proceeded upon the supposition, that abusing, upon the public examination, the rival doctrine, as they considered it, the ignorance and prejudice of the bystanders would give it all in their favour. This rude attack was meant to knock the doctrine in the head. It answered not their expectation; and therefore had they recourse to the scheme which we last mentioned. But this was also soon perceived to be an overshooting the mark.

mark. The rejection of one candidate, who was, above all others, obnoxious to them, and the admission of several, whose only title to their favour was servility, adulation, and a pretended zeal in their cause, had the effect of opening the eyes of many who had no attachment to the opposite cause. The road to another university was pointed out. Some have already taken it; others are upon the eve of setting out: and there is every probability, that, for the future, it will not be a solitary one. This is not a prophecy; it is reasoning from the same cause, that has already occurred, to the same effect. The ports of an university are now shut to this place, which, not many years ago, in the course of one summer, opened, and received no less than sixteen candidates, disgusted with the same illiberal conduct which is now so justly complained of.

Let every student, who puts any value on a degree in a certain place, if he merits it himself, look about him, and survey his competitors; and then say whether they flatter his pride. Let him read the new doctrine, and compare it with the tenets of a certain university; and then boast of the honour he could derive from those who confer his degree. But to take their labours as they are, even with a momentary concession that they fulfil the end of the institution; did ever a certain place, that calls itself an University,

verfity, fend out an anatomift, a chemift, or an adept in the phyfiology or pathology? Is there not fomewhere a medical corporation, fuch as that we fpeak of, where the teacher of the practice of phyfic has at all times given out, that none of his pupils ever underftood any part of his doctrine? and even appeared to boast of it; as if incomprehenfibility could be a matter of exultation to a teacher in fciences; or incapability to comprehend fuch materials, a caufe of reproach to the hearers. Let the fame candidate we have been fpeaking of attentively perufe the remarks in this work on Universities, and compare the refult of all their labours with that of a few men, who made head againft the whole collective mafs of them; and, after making fo deep and extenfive a reflection, if the etiquette of fociety renders the diftinction of Doctorfhip excufable, let him decide with himfelf, whether he ought to value himfelf for his title, or his title for himfelf.

If what we have faid in the laft pages fhould to any one appear an approach to perfonality, I anfwer, that he is miftaken. Every thing that has been faid in thefe pages is infeparably connected with the fubject, and even more illuftrative of it than feveral other parts. We have taken notice of a body of men, the original intention of whole institution was, *firft*, before they entered
upon

upon their several departments of teaching, that they should be possessed of abilities adequate to the charge intrusted to them. *2dly*, To exert these abilities to the utmost in the performance of their duty. *3dly*, To encourage and support by their interest, influence, and authority, every effort towards improving any branch whatever: and, if such improvement should happen to be subversive of any thing that might formerly have been taught, not to fret at the discovery of a new truth proving the detection of an old error; but recollect from Lord Bacon, that “ there is “ a great difference betwixt new light and new “ commotions.” We have demonstrated, that they have acted diametrically opposite to every part of their duty according to the description just now given of it. And their only reason for all this unwarrantable conduct was to maintain their own doctrines and systems, such as the reader now knows them to be; and to suppress a discovery of that magnitude and importance which we need not now repeat, and to pursue its author to destruction. We have not talked of any of this gentleman’s adversaries as individuals. We have said nothing about their religion or morality. Nobody will learn from our detail, whether they be men of polite manners, or the contrary. We have not even meddled with a topic which obtruded itself upon us, the consideration of their estimation

estimation of money. All our observations apply to them as a body. And with respect to him, to whom they make so united an opposition, none of the same particulars, as relating to him, have been taken notice of; though every thing of that nature would have been much in his favour, and made a contrast by no means favourable to his enemies. We have stuck to our subject, and opposed him, *with his truth*, and the adherents which by that *alone* he has gained to his side, as a body also, not to them only in the same capacity, but to a world of ignorant, prejudiced, waspish, and interested men. And, as we have formerly said, such is the weight truth adds to his scale, that, ere long, there is not the least possibility that it will not preponderate.

While we have thus kept to the proper idea of our subject, and avoided personality; as there is one who has thought proper to stand forth a champion in the opposite cause, and thrown the gauntlet; we hope our readers, as men of honour, will allow us to think that our honour also is engaged to accept of the challenge. Hoping, therefore, that we have obtained their permission, we now proceed to make them acquainted with the particulars that have provoked this single combat. A worthy gentleman, and friend of mine, of whom we have more than once made respectful mention, and who has performed many
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excellent cures upon the principles of the new doctrine, which he heartily embraces, after having, like many others, been, for reasons already assigned, its inveterate enemy, had first been fully resolved to take his degree from a neighbouring university. But, upon communicating the matter to his friends, in duty to them, he desisted from his intention. Rendered obnoxious to them by his avowed attachment to the new doctrine, he had consequently no other alternative, but either to recant, or fight his way through their several examinations. He chose the latter, and carried his point. And now the only question with them was, in what form to let his printed dissertation pass to the public. He had composed it according to the idiom of the new doctrine. That was a piece of conduct by no means delectable to them. But their policy here was very fine. Since they could not get the author to renounce the whole body of his work, that it might be the less striking to the readers, that a portion of the Brunonian doctrine had been admitted, they made it a point, that every thing which would tend to render this fact more glaring should be kept out of the thesis. Therefore quotations from the *Elementa Medicinæ* were peremptorily forbidden. The author made a struggle for *one*; which was the 69th, 70th, and 71st paragraphs. The application was in the following words:

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SIR,

“SIR,

“A former experience of your civility prevents my apologising for troubling you on the following occasion; viz.

“From a strict perusal and attention to my Dissertation, I find it necessary to solicit your approbation of inserting the quotation I made from Dr Brown’s printed book, to which you formerly objected.

“Amongst many other reasons, I will submit the two following to your consideration.

“1st, That without it I am prevented from saying what *I really believe*, to the manifest injury of my Dissertation.

“2^{dly}, That I am deprived of the liberty other candidates have always enjoyed, in making quotations from any author: A privilege, too, which was *promised me by Dr Gregory*.

“As I wish to have my Dissertation printed immediately, your answer, as soon as convenient, would oblige your humble servant;

J. WAINMAN.

The answer was as follows:

“SIR,

“I objected to your quotation, as I have often done to quotations made by other candidates; not that it contained the opinion of *this Doctor*, or of *that Professor*; but that it contained such jargon, as could not fail to dis-

“grace

“ grace the candidate, and of course the Uni-
 “ versity which gave sanction to its publication.
 “ As to the liberty you say ‘ candidates have al-
 “ ways enjoyed of making quotations from any
 “ author, right or wrong,’ I never heard of it
 “ before; and *am determined* to give it *no quarter*
 “ neither now nor hereafter. I am,

SIR,

EDINR. May 21. }

Your most obed^t. servant,

ALEX^r. MONRO.

Here the reader will probably acknowledge with me, that this was a very strange answer to be sent to so reasonable and modest a request. It gives, however, a very good illustration of what has been said before upon the conduct of the whole junto. Which, viewed in all lights, and scrutinized to the bottom, will be found to have one uniform, invariable object; and that is, without reasoning, without pretending even to colour their shameless proceedings, in defiance of all decorum, and the common sense of mankind, and, by downright outrage, to carry their point of quashing this doctrine. This dissertation wants the completeness that the author would have given it on many accounts. For though what has been allowed of it to make its appearance in public, is in strict conformity to the fundamental view of the doctrine from which it was taken; yet it could easily be perceived, that se-

veral parts required to be filled up, others to be polished, others to be a little retrenched, and the arrangement of the whole to be better adjusted. It would also have been further in his favour, to have confirmed his doctrine by such views of the subject as might be found in a different form, and more complete state, either in the original work, or in other essays; and which it might have been inconsistent with his plan to transfer into the body of his work. All this would have thrown a light upon the subject, which it was impossible, *even for professors*, not to penetrate. But that was the very reason, for which he was not allowed to give such finishing to his performance. The doctrine which he had adopted was meant to be extirpated; and therefore it was to be stripped of every comely feature, that could recommend it to the favour of the public. In a word, our author, like many other candidates, had given in his performance in a very unfinished state; and he only meant it as a *prima cura*, intending, as is usually permitted, to give it more completeness before it went to the press. The less complete, the better for their purpose; and therefore a point was made, that it should go as it was. Of this the reader must be convinced, when he sees, from the direct proof before him, that a single quotation could not be permitted, and that contrary to their public faith *pledged by their Deans*.

After

After laying the plain state of the fact before our reader, let us examine this mighty professor's reasons for rejecting the quotation in question. It is a very simple one, viz. because "it contained such *jargon*, as could not fail to *disgrace* the candidate, and of course the *university* which gave sanction to its publication." It is difficult to say, whether this gentleman's words or his meaning most want a little smoothing and polishing. Refinement in language and sentiment seems not to claim any conspicuous place among his accomplishments. The journeymen bakers and brewers in this city are a worthy and useful part of the community. But, though they are not distinguished for politeness, it is likely that they would express themselves, upon any subject within the sphere of their knowledge, in a manner greatly superior to that we have before us. And, with respect to delicacy and justness of sentiment, we believe, nobody who knows the characters here opposed to each other, would hesitate long in determining to which he should give the preference. The books from a father and his son, concerning the first discovery of the lymphatic system, which gave birth to another from the very ingenious Dr William Hunter, and which last was never answered; though they are therefore read by nobody at present; these, as well as the style in which they were written, are still fresh in the memories of most people.

people. And his unanswerable book, after not answering and therefore being understood by the public to have relinquished his pretended discovery to his rival, the constant vehemence of language in his class, still upon the same subject, only equalled by the impotence and unseasonableness of his arguments, are known to thousands. The controversial spirit, which distinguishes him in his lectures, has ever excited him to the same species of rhetoric against the greatest names which come in his way, through the whole extent of the miscellaneous subjects which he touches upon in his course. These are so many instances of there being nothing *extraordinary* to him, in the *extraordinary* style which he has made use of in the letter before us. And the little conviction, that ever arose from his controversial discussions before his pupils, is an equal proof of his powers in reasoning. If harsh language, and hot exclamation, be the characteristics of true philosophy, this gentleman is the greatest philosopher upon earth. So much for his manner and sentiment.

Now, next, to use his own predominant expression: After passing so harsh a sentence upon the poor banished quotation, could it be deemed unfair to demand his reason for so blunt and porter-like an assertion? He should remember, that he is not here acting as a secret politician, and performing his part in a plot. He has made

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an attack as a foe, and avowed it by subscription. It was therefore expected, that he should appear with all his offensive armour about him. But where are his arms? Where is his shield, and the other defensive weapons? He has none. His whole enterprise amounts to this: Drawcansir-like, *I stand here, and I say so*; and “*I will give no quarter either here or hereafter!*” Could it be possible, that this laughable gentleman proceeded on any comparison of himself with David against Goliath?

To drop the metaphor, we call upon this gentleman for his reason. Did he ever read what is published of this new doctrine? Did he ever make a proper inquiry into that which is not published, and upon which the subject of this dissertation was founded? Are there not a set of men, whom he and we know, who have openly declared that they could not read the book? Whether that be to their honour or not, let the reader decide. But in the mean time, if this gentleman, and those others, confess themselves *grossly* ignorant of this doctrine, upon what principle can they be warranted for forming any judgment of the whole, or any part, of any kind? With respect to the little portion of it in question, there is not an old woman, who ever had moderate parts as a woman, and these not much decayed, to whom it cannot be made as plain as the simplest proposition. This work, in all
its

its parts, without exception, was never perused or explained to any person, often of the most ordinary intellect, without being fully understood, and producing assent and conviction. Yet, while that is undeniably the true state of the case, and the doctrine the most simple, and perspicuous, and comprehensible of any, good or bad, that ever has appeared; I have had another letter put into my hands, in which it is called "The late book of Medical Revelations *". This letter is subscribed, A. MONRO.

Edinburgh, May, 22d, 1781.

* *Revelations* is an expression among the vulgar for *revelation*. But that is a piece of inaccuracy in language, excusable in our author; as elegance of style, and literary accomplishment, occupy not his attention, and gentleness and refinement of expression would not answer the purposes to which he is destined in the province assigned him. If this doctrine were an apocalypse, how is it to be explained, that no person ever came to hear it without prejudice, and even ill-will, to the author; and that none ever heard a few lectures without conviction, and proving such affectionate pupils as no teacher of medicine in Europe at this day can boast of? We forbear to give the catalogue; for we do not choose to exert our full strength: we choose to stop in the middle of our course.

F I N I S.

